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November 3, 2015

**BY HAND DELIVERY**

Joel H. Peck, Clerk  
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Richmond, Virginia 23219

*Application of Virginia Electric and Power Company For approval to establish experimental companion rates, designated Rate Schedule MBR - GS-3 (Experimental) and Rate Schedule MBR - GS-4 (Experimental) pursuant to § 56-234 B of the Code of Virginia*  
Case No. PUE-2015-00108

Dear Mr. Peck:

Enclosed please find for electronic filing in the above-captioned proceeding on behalf of Virginia Electric and Power Company the *Application of Virginia Electric and Power Company For approval to establish experimental companion rates, designated Rate Schedule MBR - GS-3 (Experimental) and Rate Schedule MBR - GS-4 (Experimental) pursuant to § 56-234 B of the Code of Virginia.*

If you have any questions, please do not hesitate to contact me.

Very truly yours,



Kristian M. Dahl

Enclosures

cc: William H. Chambliss, Esq. (enclosures)  
Lisa S. Booth, Esq. (enclosures)

## COMMONWEALTH OF VIRGINIA

## STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER	)	
COMPANY	)	
	)	Case No. PUE-2015-00108
For approval to establish experimental companion	)	
rates, designated Rate Schedule MBR - GS-3	)	
(Experimental) and Rate Schedule MBR - GS-4	)	
(Experimental) pursuant to § 56-234 B of the	)	
Code of Virginia	)	

**APPLICATION OF VIRGINIA ELECTRIC AND POWER  
COMPANY FOR APPROVAL TO ESTABLISH EXPERIMENTAL COMPANION  
RATES, DESIGNATED RATE SCHEDULE MBR - GS-3 (EXPERIMENTAL)  
AND RATE SCHEDULE MBR - GS-4 (EXPERIMENTAL)  
PURSUANT TO § 56-234 B OF THE CODE OF VIRGINIA**

Pursuant to § 56-234 B of the Code of Virginia ("Va. Code") and Rule 80 of the Rules of Practice and Procedure of the State Corporation Commission of Virginia ("Commission"), 5 VAC 5-20-80, Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company"), by counsel, respectfully requests Commission approval of its application ("Application") to establish two new, experimental and voluntary companion tariffs, designated Rate Schedule MBR - GS-3 (Experimental) and Rate Schedule MBR - GS-4 (Experimental) (collectively, the "MBR Rate Schedules"). This Application is supported by the pre-filed direct testimony of Company Witness Gregory J. Morgan and Michael S. Hupp, Jr. In support of this Application, the Company respectfully shows the following:

1. Dominion Virginia Power is a public service corporation organized under the laws of the Commonwealth of Virginia furnishing electric service to the public within its certificated service territory. The Company also supplies electric service to nonjurisdictional customers in Virginia and to the public in portions of North Carolina. Dominion Virginia

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Power's electric system, consisting of facilities for generation, transmission, and distribution of electric energy, as well as associated facilities, is interconnected with the electric systems of neighboring utilities and is part of the interconnected network of electric systems serving the continental United States. By reason of its operation in Virginia and North Carolina and its interconnections with other electric utilities, the Company engages in interstate commerce.

2. The Company's name and post office address are:

Virginia Electric and Power Company  
120 Tredegar Street  
Richmond, Virginia 23219

3. The names, post office addresses and telephone numbers of the attorneys for the Company are:

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## I. BACKGROUND

4. Dominion Virginia Power recently filed an application for approval of a special rate contract under Va. Code § 56-235.2 for a customer with unique load characteristics and a

corporate commitment to increase renewable energy supply.<sup>1</sup> In developing that Special Rate Contract, the Company recognized there may be other customers who may have an interest in this type of market-based rate ("MBR"). The Company identified an opportunity to test the MBR, on an experimental basis, for certain high load-factor customers in order to gauge customer interest in an MBR and to gather necessary information about the MBR implementation with respect to other customers, outside the context of the Special Rate Contract, in furtherance of the public interest.

## II. MBR RATE SCHEDULES

5. Company Witness Morgan testifies that the MBR Rate Schedules contain a newly designed and optional MBR structured to reflect pricing in the PJM Interconnection, L.L.C. ("PJM") wholesale market for qualifying customers who would otherwise take service under Rate Schedule GS-3 or GS-4. The rate design components in the MBR Rate Schedules include a generation capacity charge, generation energy charge, PJM ancillary service charge, and PJM administrative fee charge. The MBR Rate Schedules also contain a margin charge. This margin charge is intended to cover any differences between the Company's designed MBR in the MBR Rate Schedules and the actual marginal PJM costs to serve customers electing to migrate from Rate Schedules GS-3 and GS-4 to the applicable companion Rate Schedules MBR - GS-3 (Experimental) and MBR - GS-4 (Experimental), and provide some contribution toward the Company's administrative and fixed costs. Company Witness Hupp explains the technical aspects of these components, and the MBR Rate Schedules contain greater detail relating to the rate design components.

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<sup>1</sup> *Application of Virginia Electric and Power Company, For approval of special rates, terms and conditions pursuant to § 56-235.2 of the Code of Virginia and for expedited consideration*, Case No. PUE-2015-00103, filed Sept. 21, 2015, as revised by the errata filing on Oct. 29, 2015 (the "Special Rate Contract").

6. There are eligibility requirements that a customer must first satisfy before electing to participate in the MBR Rate Schedules. A customer must be currently taking electric service under Rate Schedule GS-3 or GS-4, subject to certain qualifications and limitations that are specified in the applicable Rate Schedule MBR - GS-3 (Experimental) or MBR - GS-4 (Experimental). The customer must have a measured peak demand of five (5) megawatts (MW) or more during at least three (3) billing months in the current and previous eleven (11) billing months, a billing history with the Company for at least twelve (12) consecutive billing months in the current and previous eleven (11) billing months, and a qualifying average monthly load factor of at least 85%. Additionally, the MBR Rate Schedules will have a total combined participation cap of 200 MW, and a minimum term of three (3) years.

7. The Company plans to implement the MBR Rate Schedules within 60 days of receiving approval from the Commission. Upon approval, an electronic enrollment process will be offered on the Company's website, <www.dom.com>, for eligible customers. Eligible customers will be able to enroll until the earlier of the participation cap being reached or November 1, 2019, provided customers have satisfied all of the qualifications and requirements of the MBR Rate Schedules, including the notice requirements set forth in Paragraphs I and XIX thereof. The Company is proposing that the experimental MBR tariff conclude on December 31, 2022.

8. There is no anticipated impact on reliability or change in the Company's PJM market operations. A qualifying customer's election to move an account from Rate Schedule GS-3 to Rate Schedule MBR - GS-3 (Experimental), for example, will not impact how the Company's load will be bid or otherwise offered into the PJM market. The Company will continue to procure energy and capacity requirements to service its load as it has in the past. The

only distinction will be that a customer electing Rate Schedule MBR - GS-3 (Experimental) will be charged a rate that reflects PJM wholesale market pricing. Consequently, the MBR Rate Schedules will not change the Company's PJM market operations or the Company's actual costs to serve its load.

9. The MBR Rate Schedules have been designed as companion tariffs to the applicable of Rate Schedule GS-3 or GS-4. With this companion rate design, a participating customer's billing statement will look much as it does today with the exception of a new line item ("Net Schedule MBR - GS-3 Charge" or "Net Schedule MBR - GS-4 Charge"), which is the computed variance between the MBR charges and the applicable of the traditional Rate Schedule GS-3 or GS-4 charges for generation. This companion rate design enables the Company to continue to fund the Commission-approved Virginia jurisdictional fuel clause and rate adjustment clauses ("RACs") for generation, transmission, and demand-side management to ensure that no impacts to other, nonparticipating Virginia jurisdictional customers occur during the transitional rate period ("TRP"). Specifically, as to base rates, the Company is in a rate freeze or TRP through December 31, 2019 pursuant to Va. Code § 56-585.1:1. Because of the continued unaltered funding of RACs and fuel together with frozen base rates during the TRP, the MBR Rate Schedules will have no impact on other Virginia jurisdictional customers during the TRP.

10. If the Commission approves the MBR Rate Schedules, the Company would collect data and information primarily relating to customer interest in the MBR and the MBR implementation with respect to other customers, outside the context of the Special Rate Contract, in furtherance of the public interest. The Company expects to analyze differences in load profiles and peak demands of customers on the MBR Rate Schedules. The Company will assess

the volatility of an MBR and how such rate volatility may impact participating customers' bills. The Company will also analyze its metering and billing systems to prepare and implement the traditional and companion bills. The Company will collect information on the MBR variability and corresponding base rate variance to determine the extent of possible base rate impacts following the expiration of the TRP. Further, evaluating the volumes of customers on the MBR Rate Schedules and the volatility of the MBR will help the Company understand what types of risk management transactions, if any, may be necessary to lessen impacts. Collectively, this information will help the Company determine which classes of customers and customer load profiles may be best suited for any future MBR offering, and how to manage any impacts in a way to minimize the effects on nonparticipating customers.

11. Additionally, if the MBR Rate Schedules are approved by the Commission, the Company proposes to track key metrics, make annual updates to the Commission, and submit a final comprehensive report within 90 days of the conclusion of the MBR Rate Schedules.

## V. CONCLUSION

12. Pursuant to Va. Code § 56-234 B, the Company is proposing its MBR Rate Schedules to provide eligible customers with an experimental, optional and newly designed MBR structured to reflect pricing in the PJM wholesale market to serve those qualifying customers who would otherwise take service under Rate Schedule GS-3 or GS-4. Through the implementation of the MBR Rate Schedules, if approved, the Company expects to acquire information relating to customer interest in the MBR, the MBR implementation with respect to customers, outside the context of the Special Rate Contract, its potential applicability for other customers, and to study the MBR variability throughout the term of the MBR Rate Schedules, proposed to expire on December 31, 2022.



WHEREFORE, Dominion Virginia Power respectfully requests that the Commission approve the Company's proposed experimental companion rates, designated Rate Schedule MBR - GS-3 (Experimental) and Rate Schedule MBR - GS-4 (Experimental) pursuant to § 56-234 B and grant such other and further relief as it deems necessary or appropriate.

Respectfully submitted,

VIRGINIA ELECTRIC AND POWER COMPANY

By:   
Counsel

Dated: November 3, 2015

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WITNESS DIRECT TESTIMONY SUMMARY

Witness: Gregory J. Morgan

Title: Director of Customer Rates

Summary:

My direct testimony explains two proposed experimental, and voluntary companion rate schedules, designated Rate Schedule MBR - GS-3 and Rate Schedule MBR - GS-4 ("MBR Rate Schedules"), for certain qualifying high load-factor customers pursuant to § 56-234 B of the Code of Virginia. The Company recently filed an application for approval of a special rate contract, containing a market-based rate ("MBR"), in Case No. PUE-2015-00103, for a customer with unique load characteristics and a corporate commitment to increase renewable energy supply (the "Special Rate Contract"). In developing the Special Rate Contract, the Company recognized that other customers may be interested in this type of MBR. The Company is proposing the MBR Rate Schedules, on a limited, experimental basis for certain qualifying high-load customers to gauge customer interest in this MBR, and to gather information about the MBR implementation with respect to other customers, outside the context of the Special Rate Contract, in furtherance of the public interest.

A key provision of the proposed MBR Rate Schedules would allow qualifying customers to choose the newly designed and optional MBR structured to reflect pricing in the PJM Interconnection, L.L.C. ("PJM") wholesale market. The optional MBR would allow participating customers, who may be considering or actively making investments of their own in renewable generation at the wholesale level, to financially correlate their wholesale PJM electric market participation with their retail billing. Other customers may prefer this pricing structure for other reasons and may be inclined to take some risk to achieve what they believe could be the lowest available price for electric service.

Other key terms of the MBR Rate Schedule include:

- The MBR Rate Schedules contain a margin charge intended to cover any differences between the MBR and the actual marginal PJM costs to serve participating customers, and provide some contribution toward the Company's administrative and fixed costs.
- The MBR Rate Schedules will be available to any customers who are eligible for the applicable of Rate Schedule GS-3 or GS-4, have a measured peak demand of 5 MW or more, have a qualifying average monthly load factor of at least 85%, provide a signed officer certification affidavit, and meet the additional criteria set forth in the MBR Rate Schedules.
- The MBR Rate Schedules will have a total combined participation cap of 200 MW.
- A minimum term of three years, with automatic renewals, on a year-to-year basis, subject to certain qualifications and requirements in the MBR Rate Schedules, with the overall term of the MBR Rate Schedules proposed to expire on December 31, 2022.

**DIRECT TESTIMONY  
OF  
GREGORY J. MORGAN  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE  
STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUE-2015-00108**

**INTRODUCTION**

1

2   **Q.**    Please state your name, position of employment, and business address.

3    A.    My name is Gregory J. Morgan, and I am Director of Customer Rates for Virginia  
4          Electric and Power Company ("Dominion Virginia Power" or the "Company").  
5          My business address is One James River Plaza, 701 East Cary Street, Richmond,  
6          Virginia 23219. A statement of my background and experience is attached as  
7          Appendix A.

8   **Q.**    What are your responsibilities as Director of Customer Rates?

9    A.    In that role, I lead the team that is responsible for planning, organizing and  
10         managing the Company's rate-related activities, including the preparation and  
11         support of rate filings with the Commission and the implementation of rates. I  
12         also have responsibility for customer load research, cost allocation and cost of  
13         service studies as required in supporting our rate activities. Additionally, I am  
14         responsible for the development and administration of contracts with non-  
15         jurisdictional or special contract customers and for responding to customer  
16         requests concerning rates.

17   **Q.**    What is the purpose of your testimony in connection with this Application?

18    A.    I am presenting testimony in support of the application ("Application") that  
19          Dominion Virginia Power has filed with the State Corporation Commission of

1 Virginia ("Commission") for approval of two experimental and voluntary tariffs  
2 designated Rate Schedule MBR - GS-3 (Experimental) and Rate Schedule MBR -  
3 GS-4 (Experimental) (collectively, the "MBR Rate Schedules") pursuant to § 56-  
4 234 B of the Code of Virginia ("Va. Code" or "Code").

5 My direct testimony will explain the reasons the Company is presenting this  
6 offering for Commission approval at this time. I will introduce the design  
7 components of the MBR Rate Schedules and their market-based rate ("MBR")  
8 component. Next, I describe the differences between the MBR Rate Schedules  
9 and Rate Schedules SCR - GS-3 and SCR - GS-4 (the "SCR Rate Schedules")  
10 contained in a recently filed application for approval of a special rate contract.<sup>1</sup>  
11 Finally, I will explain why the experimental and optional MBR Rate Schedules  
12 will assist the Company in acquiring information in furtherance of the public  
13 interest.

14 Company Witness Michael S. Hupp, Jr., Director of Power Generation Regulated  
15 Operations, describes the Company's energy desk functions relating to PJM  
16 Interconnection, L.L.C. ("PJM"), and addresses the technical elements of the  
17 MBR that relate to PJM markets and operations.

18 **Q. Are you sponsoring any exhibits with your pre-filed direct testimony?**

19 **A.** Yes. I am sponsoring Company Exhibit No. \_\_\_\_, GJM, consisting of Schedules 1  
20 - 3, which were prepared under my supervision and direction, and are accurate

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<sup>1</sup> *Application of Virginia Electric and Power Company, For approval of special rates, terms and conditions pursuant to § 56-235.2 of the Code of Virginia and for expedited consideration, Case No. PUE-2015-00103, filed Sept. 21, 2015, as revised by the errata filing on Oct. 29, 2015 (the "Special Rate Contract").*

1 and complete to the best of my knowledge. Schedule 1 contains Rate Schedule  
2 MBR - GS-3 (Experimental), applicable to customers where the companion rate  
3 schedule is Rate Schedule GS-3, Large General Service – Secondary Voltage  
4 (“Rate Schedule GS-3”), and Schedule 2 contains Rate Schedule MBR - GS-4  
5 (Experimental), applicable to customers where the companion rate schedule is  
6 Rate Schedule GS-4, Large General Service – Primary Voltage (“Rate Schedule  
7 GS-4”). Schedule 3 shows an example of a hypothetical customer’s bill if such a  
8 customer were to move its qualifying account to the applicable companion Rate  
9 Schedule MBR - GS-3 (Experimental) (the “Sample Bill”).

10 **Q. Please discuss the MBR and the design components in the MBR Rate**  
11 **Schedules.**

12 **A..** The MBR Rate Schedules contain a newly designed rate for the generation  
13 components of a customer bill structured to reflect pricing in the PJM wholesale  
14 market for qualifying customers who would otherwise take service under Rate  
15 Schedule GS-3 or GS-4. If approved by the Commission, the MBR Rate  
16 Schedules would serve as elective options for certain of the Company’s high load-  
17 factor commercial and industrial customers.

18 The design components of the MBR include a generation capacity charge,  
19 generation energy charge, PJM ancillary service charge, and PJM administrative  
20 fee charge. The technical aspects and general design of these components are  
21 described in Company Witness Hupp’s testimony and, in greater detail, in the  
22 MBR Rate Schedules.

1 The MBR Rate Schedules also contain a margin charge. This margin charge is  
2 intended to cover any differences between the Company's designed MBR in the  
3 MBR Rate Schedules and the actual marginal PJM costs to serve customers  
4 electing to migrate from Rate Schedule GS-3 or GS-4 to the applicable  
5 companion Rate Schedule MBR - GS-3 (Experimental) or MBR - GS-4  
6 (Experimental), and provide some contribution toward the Company's  
7 administrative and fixed costs.

8 **Q. Why is the Company presenting the MBR Rate Schedules for Commission**  
9 **approval at this time?**

10 **A.** The Company recently filed an application for approval of a Special Rate  
11 Contract under Va. Code § 56-235.2 for a customer with unique load  
12 characteristics and a corporate commitment to increase renewable energy supply.  
13 In developing the Special Rate Contract, the Company recognized that there may  
14 be other customers who may be interested in this type of MBR. Accordingly, the  
15 Company identified an opportunity to test this MBR, on an experimental basis, for  
16 certain of these large, high load-factor customers in order to gauge customer  
17 interest in this MBR, and to gather information about the MBR implementation  
18 with respect to other customers, outside the context of the Special Rate Contract.

19 **Q. Speaking of the Special Rate Contract, are the MBR Rate Schedules and the**  
20 **SCR Rate Schedules identical or are there differences?**

21 **A.** As to the actual rates – a market-based rate for certain high load-factor customers  
22 – offered in both, the SCR Rate Schedules and the MBR Rate Schedules are the  
23 same.

1 There are a few minor differences, however, due to the nature of each offering:  
2 the SCR Rate Schedules are for the Special Rate Contract, filed under Va. Code §  
3 56-235.2 (special contracts), and are specifically designed and tailored for a  
4 customer with unique load characteristics and a customer-specific corporate  
5 commitment to renewable energy. The MBR Rate Schedules, in contrast, are  
6 offered under Va. Code § 56-234 B (experimental rates), and are designed to be a  
7 more general offering to other qualifying large, high load-factor customers.

8 For the reasons described in that application, the SCR Rate Schedules do not  
9 contain a load-cap for participating accounts. The MBR Rate Schedules, by  
10 contrast, will be offered on an experimental, limited-basis and are proposed to  
11 have capped participation.

12 **Q. Can you briefly describe the PJM wholesale market pricing and explain why**  
13 **a customer may be interested in it?**

14 **A.** The MBR is structured to reflect market pricing in the PJM wholesale market as  
15 an alternative to pricing based upon the Company's traditional tariffs, which are  
16 linked to its embedded cost of service. There may be some customers who are  
17 either considering or actively making investments of their own in renewable  
18 generation at the wholesale level. These MBR Rate Schedules may be of more  
19 interest to these customers in financially integrating such generation with their  
20 retail load. Through this more direct financial correlation, a customer could  
21 achieve a more predictable net "all-in cost," when considering both its wholesale  
22 market activity and its retail load costs.

1        Additionally, there may be customers who would prefer this pricing structure for  
2        other reasons and may be inclined to take some risk in order to achieve what they  
3        believe could be the lowest available price for electric service.

4        **Q.     Can all customers on Rate Schedules GS-3 and GS-4 participate in the MBR**  
5        **Rate Schedules or are there limitations?**

6        A.     The MBR Rate Schedules are proposed to be generally available to any customer  
7        currently taking electric service under Rate Schedule GS-3 or GS-4, subject to  
8        certain qualifications and limitations that are specified in Rate Schedules MBR -  
9        GS-3 (Experimental) and MBR - GS-4 (Experimental). The customer must have  
10       a measured peak demand of at least five (5) megawatts (MW) or more for at least  
11       three (3) billing months during the current and previous eleven (11) billing  
12       months, a billing history with the Company for at least twelve (12) consecutive  
13       billing months in the current and previous eleven (11) billing months, and a  
14       qualifying average monthly load factor of at least 85%. Additionally, there will  
15       be a total combined participation cap of 200 MW for the MBR Rate Schedules.  
16       So long as the participation cap has not been met, any customer account satisfying  
17       these and all other qualifications and requirements described in the MBR Rate  
18       Schedules would be permitted to elect to transfer from the current Rate Schedule  
19       GS-3 or GS-4 to the applicable MBR Rate Schedule.

20       **Q.     Why are the MBR Rate Schedules only being offered to Rate Schedules GS-3**  
21       **and GS-4 customers and not to all customers at this time?**

22       A.     Because of the highly variable nature of the MBR, the Company, at this time, is  
23       not of the view that the MBR is or will be consistently a preferable way to design



1 rates for the benefit of most of its customers. Our experience demonstrates that,  
2 in general, our customers prefer stable rates, in the form of higher-fixed, lower-  
3 variable rate structures, as opposed to volatile rates like an MBR, in the form of  
4 higher-variable, lower-fixed rate structures. Accordingly, we have decided to  
5 offer the MBR Rate Schedules on an experimental basis only to a limited set of  
6 large customers who have a high load-factor, and have signed an officer  
7 certification affidavit, which will certify to the Company that the customer  
8 understands the risks and requirements for the MBR, as well as the potential rate  
9 volatility associated with the MBR.

10 **Q. Why is the Company proposing a 200 MW total combined participation cap**  
11 **on the MBR Rate Schedules?**

12 A. Because of the volatile nature of the MBR, the Company considers it prudent to  
13 contain and manage potential impacts. That is especially important at this  
14 experimental stage, and the 200 MW total combined cap is a reasonable way to do  
15 so, both in terms of that revenue volatility and in terms of the additional  
16 administrative efforts required to manage this new rate schedule on a daily basis  
17 until we learn more about the MBR in practice.

18 **Q. Please explain the proposed duration of the MBR Rate Schedules and**  
19 **whether they contain a "minimum term."**

20 A. The Company is proposing that the experimental MBR tariffs conclude on  
21 December 31, 2022. In addition, we are proposing a minimum term for a  
22 customer who elects to migrate to the applicable MBR Rate Schedule to be set at  
23 three years, which term will renew automatically for additional one-year terms,

1 subject to the qualifications and requirements in the MBR Rate Schedules. This  
2 term is designed to prevent short-term, economically-motivated switching  
3 between tariffs, which could otherwise occur given that wholesale prices reflected  
4 in the MBR are expected to have greater variability than the standard tariff rate.

5 Based on a minimum term requirement of three years, the latest date on which a  
6 customer may enroll to participate in the applicable MBR Rate Schedule is  
7 November 1, 2019.

8 **Q. What impact will the MBR Rate Schedules have on Dominion Virginia**  
9 **Power's other customers?**

10 A. Distribution service charges and transmission service charges are unchanged in  
11 the MBR Rate Schedules and will continue to be billed to customers consistent  
12 with their current rate schedules, as applicable, *i.e.*, Rate Schedule GS-3 or GS-4.

13 When compared to customers remaining on the applicable standard tariff rates,  
14 the MBR is expected to change revenues, but will not change the Company's  
15 actual fuel expenses or its allocation factors upon which Commission-approved  
16 rate adjustment clauses are established. The Company plans to implement the  
17 MBR Rate Schedules as companion tariffs to Rate Schedules GS-3 and GS-4.

18 With this design, a customer will remain in the same rate class, and the Company  
19 will compute a traditional bill under Rate Schedule GS-3 or GS-4 as well as a  
20 companion bill under the applicable companion MBR Rate Schedule. The  
21 companion bill will be set equal to the difference between generation service  
22 under the MBR tariff versus the traditional tariff. This value, deemed the "net

1 market-based rate charge,” will be billed in addition to the traditional bill, and the  
2 Company will record the difference as a base rate revenue variance. This  
3 companion rate design enables the Company to continue to fund the Commission-  
4 approved Virginia jurisdictional fuel clause, transmission rider, generation riders,  
5 and demand-side management riders.

6 As to base rates, the Company, pursuant to Va. Code § 56.581.1:1, is in a rate  
7 freeze period or transitional rate period (“TRP”) through December 31, 2019.

8 Taken together, through the combination of continued unaltered funding of riders  
9 and fuel, during a period of frozen base rates, the MBR Rate Schedules will have  
10 no impact on other Virginia jurisdictional customers during the TRP.

11 Beyond December 31, 2019, any impacts in the context of base rates – be they in  
12 the plus or minus column – resulting from the MBR Rate Schedules would be  
13 captured and incorporated into the Earnings Test in the Company’s 2022 statutory  
14 biennial review proceeding (*i.e.*, the test period beginning January 1, 2020 and  
15 ending December 31, 2021). At that point in time, such impacts, if any, would  
16 likely be better understood given the experience gained over the preceding years  
17 of implementing and administering the MBR Rate Schedules.

18 **Q. Can you provide an example of the billing under the MBR Rate Schedules?**

19 **A.** Yes. With this companion rate design, a participating customer’s billing  
20 statement will look much as it does today with the exception of a new line item  
21 (“Net Schedule MBR - GS-3 Charge” or “Net Schedule MBR - GS-4 Charge”),  
22 which is the computed variance between the MBR charges and the applicable of

1 the traditional Rate Schedule GS-3 or GS-4 charges for generation. A  
2 hypothetical example of this Sample Bill for Rate Schedule MBR - GS-3  
3 (Experimental), in conjunction with Rate Schedule GS-3, is attached to my  
4 testimony as Schedule 3.

5 **Q. Given the variability of market prices, is there anything that can be done to**  
6 **stabilize this rate?**

7 A. Yes. Risk management transactions present one option for both the customer and  
8 the Company to reduce the variability of energy revenues/expenses under the  
9 MBR Rate Schedules. Because PJM pricing is liquid and transparent, both parties  
10 will have the ability to independently make decisions about whether, how, and  
11 when to enter into risk management transactions. Decisions about whether the  
12 Company will seek to "hedge" this rate will be made at a later date – consistent  
13 with the purpose of these experimental rate schedules – as the Company gains  
14 actual experience with the MBR itself and receives data on the volumes and  
15 variability involved. From a regulatory accounting perspective, the Company  
16 proposes that the results of any future hedges entered into for this MBR rate  
17 would be accounted for in the same manner as the MBR Rate Schedules, that is as  
18 a base rate revenue item.

1 Q. Under § 56-234 B of the Va. Code, an experimental rate must be  
2 demonstrated to be "necessary in order to acquire information which is or  
3 may be in furtherance of the public interest." How do the proposed MBR  
4 Rate Schedules satisfy this requirement?

5 A. The MBR Rate Schedules are voluntary, experimental rate schedules. As I  
6 previously noted, they are designed, modeled and proposed to provide an option  
7 for certain qualifying high load-factor customers similar to that provided to the  
8 customer in the Special Rate Contract.

9 Virginia's diversified, growing and increasingly high-tech economy is undergoing  
10 rapid transformations. Flexibility is often paramount, and in the area of electric  
11 service in particular, we are hearing more from our customers about the need for  
12 increased options. Many of these customers are facing particular pressure to  
13 encourage and engage more renewable energy and other "green" solutions. The  
14 Company understands that those pressures are motivating many customers to  
15 reach renewable goals faster than the Company's overall energy mix can provide  
16 at the present time, and that such customers want more options in terms of  
17 renewable energy. The MBR Rate Schedules are designed as one way to  
18 accommodate these customers' needs by reflecting the pricing structure of the  
19 PJM wholesale market. Thus, while the MBR Rate Schedules are not directly tied  
20 to renewables, offering the newly designed and optional MBR could assist  
21 participating customers in financially integrating renewable resources. Because  
22 the MBR can be a vehicle to assist participating customers in financially

1 integrating renewable energy into their portfolios, the MBR may act as a catalyst  
2 to grow direct investments in renewable resources.

3 The MBR Rate Schedules will also help the Company understand if there is  
4 broader interest in these types of options, and will allow the Company to gauge  
5 customer interest in the MBR, and to gather information about the MBR  
6 implementation with respect to other customers, outside the context of the Special  
7 Rate Contract. The Company believes rates like an MBR, assuming they can be  
8 effectively designed and implemented, can help Virginia remain competitive in  
9 attracting new companies and enabling existing companies to expand. By  
10 offering the MBR Rate Schedules, as experimental, limited-basis rates, the  
11 Company can ensure effective design and implementation in the event they may  
12 be offered in the future as permanent rates or on an expanded-basis.

13 **Q. What specific information do you expect to collect about the MBR Rate**  
14 **Schedules?**

15 **A.** If the Commission approves the MBR Rate Schedules, the Company would  
16 collect data and information primarily relating to customer interest in the MBR  
17 and the MBR implementation with respect to other customers, outside the context  
18 of the Special Rate Contract. Specifically, the Company expects to analyze  
19 differences in load profiles and peak demands of customers on the MBR Rate  
20 Schedules. The Company will assess the volatility of the MBR and how this may  
21 impact participating customers' bills. We will also analyze metering and billing  
22 systems to prepare and implement the traditional and companion bills. The  
23 Company will collect information on the MBR variability and corresponding base

1 rate variance to determine the extent of possible base rate impacts following the  
2 expiration of the TRP. Further, evaluating the volumes of customers on the MBR  
3 Rate Schedules and the volatility of the MBR will help the Company understand  
4 what types of risk management transactions, if any, may be necessary to lessen  
5 impacts. Collectively, this information will help the Company determine which  
6 classes of customers and customer load profiles may be best suited for any future  
7 MBR offering, and how to manage any impacts in a way to minimize the effects  
8 on nonparticipating customers.

9 **Q. Does this conclude your direct testimony?**

10 **A. Yes, it does.**

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APPENDIX A

**BACKGROUND AND QUALIFICATIONS**  
**OF**  
**GREGORY J. MORGAN**

Gregory J. Morgan is a 1982 graduate of Virginia Tech with a Bachelor's degree in Mechanical Engineering. In 1988, he received a Master's degree in Business Administration from the University of Richmond.

Mr. Morgan joined Virginia Electric and Power Company in 1982 and has more than 30 years of experience including in the areas of power generation, generation system planning, wholesale market operations, financial services, and regulatory affairs. Since 1997, he has held director level positions in wholesale market operations, financial services, and customer rates.

In 2013, Mr. Morgan assumed his current position as Director – Customer Rates with the Regulatory Affairs division. His responsibilities include customer load research, cost allocation and cost of service studies, customer rate design and rate filings. Additionally, he is responsible for development and administration of electric service contracts with non-jurisdictional and special contract customers.

Mr. Morgan has previously presented testimony before the State Corporation Commission of Virginia, and the North Carolina Utilities Commission.



SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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I. APPLICABILITY AND AVAILABILITY

- A. This Schedule is a companion to Rate Schedule GS-3, Large General Service – Secondary Voltage and is applicable on an experimental basis in conjunction with Schedule GS-3 only to a Customer (i) who qualifies as a non-residential secondary voltage Customer (as defined in Paragraph XVI.); and (ii) who elects and who – as of the date of service for Customer under this Schedule – is receiving Electricity Supply Service and Electric Delivery Service from the Company under Schedule GS-3 at the Customer's service location; and (iii) whose peak measured demand has reached or exceeded 5,000 kW during at least three (3) billing months within the current and previous 11 billing months at the Customer's service location; and (iv) who has taken service from the Company for at least 12 consecutive billing months at the Customer's service location; and (v) whose Monthly Load Factor at the Customer's service location averages at least 85% for the current and previous 11 billing months, where such Monthly Load Factor is calculated in accordance with Paragraph XII., below.
- B. The Company must receive the Customer's request for service at the Customer's service location, in accordance with this Schedule, prior to November 1, 2019, when this Schedule shall close to additional Customers ("Closure Date"). In addition, all of the criteria in Paragraph I.A. and Paragraph I.C. of this Schedule must be satisfied in sufficient time for the Customer to begin receiving service under this Schedule at the Customer's service location on or prior to January 1, 2020. Unless earlier terminated in accordance with Paragraph XIX. below, this Schedule shall be withdrawn from service on December 31, 2022 and shall no longer be available to the Customer at the Customer's service location. Upon such termination or withdrawal, the Customer shall select an applicable, alternative Rate Schedule.
- C. This Schedule is available only after all of the following criteria are met:
1. The Company has installed metering equipment that it deems to be necessary to measure properly the Customer's demands and energy usage at the Customer's service location; and
  2. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment; and

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

I. APPLICABILITY AND AVAILABILITY (Continued)

3. The Customer has submitted to the Company a notarized *Officer Certification Affidavit for Rate Schedule MBR - GS-3* ("Affidavit") which acknowledges that the Customer's representative who signs such Affidavit is a duly authorized officer and understands the terms and conditions under which the Customer will be billed in accordance with this Schedule.
  4. The Company may require up to sixty (60) days after all of the criteria in Paragraph I.B., above, are met to provide service to the Customer under this Schedule.
- D. This Schedule, together with Schedule MBR - GS-4 (Experimental), is subject to a combined aggregate cap of 200 MW of participating Customer load served in accordance with Schedules GS-3 and GS-4, collectively. To determine whether a Customer can take service under this Schedule, the Company shall determine the aggregate load for both (i) the currently participating Customers on this Schedule and Schedule MBR - GS-4 (Experimental) and (ii) for the additional Customer requesting service under this Schedule. Such aggregate load shall be the sum of the loads for all such Customers (i.e., currently participating and additional Customers), based upon the higher of the Customers' (i) actual peak measured demands at their service locations, during the current and previous 11 billing months immediately prior to the date of service for the additional Customer under this Schedule or (ii) the anticipated kW demands in the Customers' load letters for their service locations, if applicable.

II. 30-DAY RATE

A. Distribution Service Charges

1. Basic Customer Charge  
Basic Customer Charge \$119.80 per billing month.
2. Plus Distribution Demand Charge  
All kW of Distribution Demand @ \$2.120 per kW
3. Plus rkVA Demand Charge @ \$0.15 per rkVA
4. Plus Distribution kWh Charges
  - a. Distribution kWh Charge for All Customers  
All kWh @ 0.007¢ per kWh

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

II. 30-DAY RATE (Continued)

- b. Plus Distribution kWh Charge for Non-exempt or Non-opt-out Customers  
All kWh @ 0.000¢ per kWh

5. Plus each Distribution kilowatt-hour used is subject to all applicable riders, included in the Exhibit of Applicable Riders.

B. Market-based Rate Charges

1. Generation Demand Charge  
All kW of Generation Demand @ Generation Demand Billing Rate per kW
2. Plus Generation Energy Charge  
All kWh @ Day-Ahead LMP per kWh
3. Plus PJM Ancillary Service Charges

Any reference to "PJM" in this Schedule means the PJM Interconnection, LLC (Pennsylvania-New Jersey-Maryland Interconnection, LLC), or any successor, that is the regional transmission organization and is part of the Eastern Interconnection grid that operates an electric transmission system.

- a. PJM Ancillary Service Charges for the current billing month, for which the Customer shall be charged, shall include all PJM ancillary service charges assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-3 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM ancillary service charges are not already included in Company's Schedule GS-3 Transmission kW Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-3. Currently, PJM Ancillary Service Charges include – but may not be limited now or in the future to – Day-Ahead and Balancing Operating Reserves, Day-Ahead Scheduling Reserves, Reactive Service and Reactive Supply & Voltage Control, Black Start and Regulation & Frequency Response, Synchronized Reserves, and Synchronous Condensing Charges. In the event of any future change in PJM's process for determining ancillary service charges, including any modification as to which ancillary services are included, this ancillary service charge shall represent the similar or like charges for ancillary service determined by PJM.

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

II. 30-DAY RATE (Continued)

- b. For PJM Ancillary Service Charges, the Company will determine for the current billing month a monthly rate in \$/kWh by taking such total monthly Dominion LSE ("DOMLSE") charges divided by total monthly DOMLSE kWh energy consumption (the "PJM Ancillary Service Charges Factor"). The Company will bill the PJM Ancillary Service Charges to the Customer based on the Customer's actual total monthly kWh energy consumption, grossed up for kWh losses, for the current billing month multiplied by the PJM Ancillary Service Charges Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.
4. Plus PJM Administrative Fees
  - a. PJM Administrative Fees for the current billing month shall include all PJM administrative fees assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-3 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM administrative fees are not already included in the Company's Schedule GS-3 Transmission Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-3. In the event of any future change in PJM's process for determining administrative fees, including any modification as to what is being represented in the administrative fees, this administrative fees charge shall represent the similar or like charges for administrative fees determined by the PJM.
  - b. For PJM Administrative Fees, the Company will determine for the current billing month a monthly rate in \$/kWh by taking such total monthly Dominion LSE ("DOMLSE") administration fee divided by total monthly DOMLSE kWh energy consumption (the "PJM Administrative Fees Factor"). The Company will bill PJM Administrative Fees to the Customer based on the Customer's actual total monthly kWh energy consumption, grossed up for kWh losses, for the current billing month multiplied by the PJM Administrative Fees Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

## II. 30-DAY RATE (Continued)

- c. In the event that PJM assigns any new costs to the loads of the Company, which are not considered to be PJM Ancillary Services or PJM Administrative Fees, in the future for the Customer's total monthly kWh energy consumption, grossed up for kWh losses, during this Schedule's Term of Contract, pursuant to Paragraph XIX., below, the Company and the Customer mutually agree that the Company shall bill and the Customer shall pay to the Company such new PJM costs. The Company shall include any and all such new PJM costs in with the PJM Administrative Fees as described in this Paragraph II.B.4., above.

## 5. Plus Margin

- a. The Customer shall pay to the Company a Margin for each kWh of Customer's total monthly energy consumption during the current billing month.
- b. Such Margin for the current billing month shall be based on the Customer's Monthly Load Factor, which the Company will calculate in accordance with Paragraph XII., below. The Customer's Monthly Load Factor at the Customer's service location shall determine the applicable Margin rate per kWh in accordance with the table below:

Customer's Monthly Load Factor	Margin Rate per kWh
>= 85%	\$0.00115
< 85%	$[\$0.00115 + ((85 - \text{Monthly Load Factor}) * \$0.00005)]$

- c. The Company shall disregard any Test Demand, as determined in Paragraph XIII., in calculating the Customer's Monthly Load Factor. In place of the Test Demand, the Company shall use the highest Non-Test Demand in the current billing month to determine the Customer's Monthly Load Factor.

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SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

II. 30-DAY RATE (Continued)

C. Electricity Supply (ES) Service Charges

1. Transmission Demand Charge  
All On-Peak ES kW @ \$ 2.277 per kW
2. Plus each kW of On-Peak Electricity Supply Demand, determined pursuant to Paragraph X., below, is subject to all applicable transmission riders, included in the Exhibit of Applicable Riders.

- D. As this Schedule is a companion schedule to Schedule GS-3, the Total Charges billed to the Customer by the Company for services under this Schedule shall be equal to the Total Schedule GS-3 Charges plus the Net Market-based Rate Charges, as described more fully below.

Where:

1. Total Schedule GS-3 Charges shall be equal to the higher of the following:
  - a. The sum of the following:
    - i. Schedule GS-3 Distribution Service Charges (see Paragraph II.A. of Schedule GS-3), which include all applicable riders; plus
    - ii. Schedule GS-3 Electricity Supply Service Charges (see Paragraph II.B. of Schedule GS-3), which include all applicable riders; or
  - b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.
2. Total Schedule MBR - GS-3 Charges shall be equal to the higher of the following:
  - a. The sum of the following:
    - i. Distribution Service Charges, which include all applicable riders, in Paragraph II.A. of this Schedule; plus

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SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

II. 30-DAY RATE (Continued)

- ii. Market-based Rate Charges in Paragraph II.B. of this Schedule;  
plus
- iii. Electricity Supply Service Charges, which include all applicable  
transmission riders, in Paragraph II.C. of this Schedule; or
- b. The minimum charge, which shall be as may be contracted for in the  
Agreement for the Provision of Electric Service (of which this Schedule  
is a part), executed by and between the Company and the Customer.
- 3. Net Market-based Rate Charges shall be equal to the Total Schedule MBR -  
GS-3 Charges minus the Total Schedule GS-3 Charges.

III. DETERMINATION OF DISTRIBUTION DEMAND

- A. The Distribution Demand shall be billed only where the normal service delivery  
voltage is less than 69 kV.
- B. The Distribution Demand billed under Paragraph II.A.2 shall be such as may be  
contracted for but not less than the highest of:
  - 1. The highest average kW measured at the location during any 30-minute  
interval of the current and previous 11 billing months.
  - 2. 500 kW.
- C. When the Customer's power factor at the Customer's service location is less than 85  
percent, a minimum distribution demand of not less than 85 percent of the  
Customer's maximum kVA demand may be established.

IV. DETERMINATION OF rkVA DEMAND

The rkVA of demand billed shall be the highest average rkVA measured at the  
Customer's service location in any 30-minute interval during the current billing month.

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SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

V. EXEMPTION AND OPT-OUT PROVISIONS FOR DISTRIBUTION KWH CHARGE

The Distribution kWh Charge in Paragraph II.A.4.b., above, shall not apply to Customers who are either exempt from or opt-out of such charge pursuant to Virginia Code § 56-585.1 A 5 c.

VI. DETERMINATION OF GENERATION DEMAND

- A. The Generation Demand billed in Paragraph II.B.1., above, shall be the higher of the following, which also shall be subject to adjustment for losses and reserves, as provided for in Paragraph VI.B., below:
  1. The Customer's highest average 30-minute kW of demand measured by the Company during the current billing month ("Maximum kW of Demand"); or
  2. The Customer's contribution to PJM's peak load (currently the average of the five (5) coincident peaks ("5CPs") of the prior Summer) shall be determined in accordance with PJM's rules for the PJM Delivery Year ("Delivery Year") prior to the current Delivery Year. In the event of any future change in PJM's process for determining the Customer's contribution to PJM peak load, the Customer's contribution to PJM's peak load shall represent the similar or like method used by PJM for determining Customer's contribution to PJM's peak load.
- B. Such kW of demand determined in Paragraph VI.A., above, shall be grossed up for losses and reserves, which are applicable to the Customer's service location. Such losses and reserves shall be calculated by the Company and updated annually.
- C. The adjustment for losses in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.A., above, shall represent the Company's average distribution and transmission loss adjustment factor for providing capacity to serve a Schedule GS-3 customer's load.
- D. The adjustment for reserves in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.C., above, shall represent the Company's required reserves based upon the volumes procured and/or assigned to the Company's load by PJM, as defined by the underlying PJM structure for acquiring capacity for load in PJM. In the event of any future change in PJM's process for determining the Company's reserve requirement for load, the required reserves shall represent the similar or like method used by PJM for determining the Company's required reserves for acquiring capacity for load in PJM.

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SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

VI. DETERMINATION OF GENERATION DEMAND (Continued)

- E. The resulting kW of demand, determined in accordance with Paragraph VI. of this Schedule, shall be the Generation Demand.

VII. DETERMINATION OF GENERATION DEMAND BILLING RATE

The Generation Demand Billing Rate for the current billing month shall be equal to the PJM Final Zonal Net Load Price in \$/MW-Day multiplied by the number of days in the current billing month and shall represent the price reflective of the cost to procure capacity in the PJM market to serve the Customer's Generation Demand at the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure capacity for load in the PJM market to serve the Customer's Generation Demand, the Generation Demand Billing Rate shall represent the similar or like method used by PJM for determining the Generation Demand Billing Rate.

VIII. DETERMINATION OF GENERATION ENERGY

The Generation Energy billed in Paragraph II.B.2, above, shall be the Customer's total monthly kWh energy consumption for the current billing month grossed up for the appropriate distribution losses for a Schedule GS-3 customer.

IX. DETERMINATION OF DAY-AHEAD LMP

The Day-ahead LMP used to bill the Customer's Generation Energy in Paragraph II.B.2, above, shall mean the respective hourly PJM Day-Ahead Locational Marginal Price ("LMP") for the applicable PJM load zone, or any successor thereto, which includes the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure energy in the PJM market to serve the Customer's Generation Energy, the Day-ahead LMP shall represent the similar or like method used by PJM for determining the Day-ahead LMP.

X. DETERMINATION OF ON-PEAK ELECTRICITY SUPPLY DEMAND

The kW of demand billed under Paragraph II.C.1., above, shall be the highest of:

- A. The highest average kW measured in any 30-minute interval of the current billing month during on-peak hours.
- B. Seventy-five percent of the highest kW of demand at the Customer's service location as determined under Paragraph X.A., above, during the billing months of June through September of the preceding 11 billing months.
- C. 100 kW.

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

XI. DETERMINATION OF ON-PEAK AND OFF-PEAK HOURS

The following on-peak and off-peak hours are applicable to the billing of the Electricity Supply Service Charges in Paragraph II.C., above.

A. On-peak hours are as follows:

1. For the period of June 1 through September 30, 10 a.m. to 10 p.m., Mondays through Fridays.
2. For the period of October 1 through May 31, 7 a.m. to 10 p.m., Mondays through Fridays.

B. All hours not specified in Paragraph XI.A. are off-peak.

XII. DETERMINATION OF MONTHLY LOAD FACTOR

The Company shall calculate the Customer's Monthly Load Factor for the current billing month at the Customer's service location, using the following formula:

Monthly Load Factor = Total kWh ÷ (24 \* Maximum kW of Demand \* Days)

Where:

Total kWh = Customer's actual monthly total kWh energy consumption for the current billing month;

24 = 24 hours per day;

Maximum kW of Demand = the demand determined for the current billing month in accordance with Paragraph VI.A.1., above;

Days = the number of days in the current billing month.

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND

- A. Periodically, the Customer may have to conduct equipment testing at the Customer's service location. Customer's equipment testing that may result in the establishment of an abnormally high average 30-minute peak measured demand ("Peak Demand") during one or more billing months at the Customer's service location. The Company will disregard the Peak Demand for the purposes of calculating the Customer's Monthly Load Factor and the Customer's Margin, in accordance with Paragraph II.B.5., above, for the current billing month when *all* of the following criteria are met:

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND (Continued)

1. Customer conducted the equipment testing at the Customer's service location; and
2. The Customer's notification to the Company and conduct of the equipment testing were in accordance with the provisions of the *Customer's Equipment Testing Agreement*; and
3. The Customer's Peak Demand was established during the date(s) and time(s) identified by the Customer on the "Official Test Schedule," which was submitted to the Company pursuant to the *Customer's Equipment Testing Agreement*; and
4. The Company approved the Customer's Peak Demand to be a Test Demand, using the provisions of the *Customer's Equipment Testing Agreement*.

The Company shall disregard any Test Demand for the Customer only from the calculation of the Customer's Monthly Load Factor for the purposes of the calculating the Customer's Margin during the current billing month.

- B. Using the Company's meter data records, the Company will determine the Customer's highest average 30-minute measured peak demand outside of the dates and times listed on the "Official Test Schedule" as the Customer's Non-Test Demand for the current billing month at the Customer's service location. The Company shall use the Customer's Non-Test Demand to calculate the Customer's Monthly Load Factor for the purposes of calculating the Customer's Margin, in accordance with Paragraph II.B.5., above.

XIV. METER READING AND BILLING AND PAYMENT

- A. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment. Such communication technology shall be provided to the Company's metering equipment at the Customer's own expense.
- B. When the actual number of days between meter readings is more or less than 30 days, the Basic Customer Charge, the Distribution Demand Charge, the rkVA Demand Charge, the Transmission Demand Charge, and the minimum charge of the 30-day rate will each be multiplied by the actual number of days in the billing period and divided by 30. Billing and payment shall be made concurrent with billing under Schedule GS-3.

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SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

XV. STANDBY, MAINTENANCE OR PARALLEL OPERATION SERVICE

A Customer requiring standby, maintenance or parallel operation service may elect service under this Schedule provided the Customer contracts for the maximum kW which the Company is to supply. Standby, maintenance or parallel operation service is subject to the following provisions:

- A. Suitable relays and protective apparatus shall be furnished, installed, and maintained at the Customer's expense in accordance with specifications furnished by the Company. The relays and protective equipment shall be subject, at all reasonable times, to inspection by the Company's authorized representative.
- B. In case the Distribution Demand determined under Paragraph III. exceeds the contract demand, the contract demand shall be increased by such excess demand.
- C. The demand billed under Paragraph II.A.2 shall be the contract demand.

XVI. DEFINITION OF TRANSMISSION, PRIMARY AND SECONDARY VOLTAGE CUSTOMER

- A. A transmission voltage Customer is any Customer whose delivery voltage is 69 kV or above and is the voltage that is generally available in the area.
- B. A primary voltage Customer is any Customer (a) served from a circuit of 69 kV or more where the delivery voltage is 4,000 volts or more, (b) served from a circuit of less than 69 kV where Company-owned transformation is not required at the Customer's site, (c) where Company-owned transformation has become necessary at the Customer's site because the Company has changed the voltage of the circuit from that originally supplied, or (d) at a location served prior to October 27, 1992 where the Customer's connection to the Company's facilities is made at 2,000 volts or more.
- C. A secondary voltage Customer is any Customer not defined in Paragraph XVI.A. or Paragraph XVI.B. as a transmission or primary voltage Customer.

(Continued)

SCHEDULE MBR - GS-3  
LARGE GENERAL SERVICE  
SECONDARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

XVII. CUSTOMER AUTHORIZATION

The Customer authorizes the Company to allow its Energy Supply personnel to have full access to the Customer's specific load, pricing, and any other necessary Customer specific information during the Term of Contract. Such authorization will allow the Company's Energy Supply personnel to support certain Company-specific activities resulting from Customer's participation on this Schedule.

XVIII. PERIODIC REVISION OF RATES

The rates contained in this Schedule and in all the applicable riders for this Schedule are subject to change from time-to-time by order of the Commission. The rates for the currently-effective Rate Schedules and all the applicable riders are available on the Company's Internet website.

XIX. TERM OF CONTRACT

- A. The term of contract for the purchase of Electric Service under this Schedule shall be as mutually agreed upon, but for not less than three (3) years. Any Customer electing to transition service to this Schedule shall remain on this Schedule for a minimum of three (3) years, continuing thereafter for additional one-year terms unless either the Company or the Customer provides the other party with written notice of termination at least sixty (60) days prior to the end of the then-current term.
- B. Notwithstanding the provisions of Paragraph XIX.A., above, and after the conclusion of the Customer's initial three-year term under this Schedule, the Customer may renew this Schedule for service at the Customer's service location for only one additional one-year term after the Closure Date, pursuant to Paragraph I.B. of this Schedule.
- C. This Schedule shall be withdrawn from service on December 31, 2022 and shall no longer be available to the Customer at the Customer's service location.

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

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151110038

I. APPLICABILITY AND AVAILABILITY

- A. This Schedule is a companion to Rate Schedule GS-4, Large General Service – Primary Voltage and is applicable on an experimental basis – in conjunction with Schedule GS-4 – only to a Customer (i) who qualifies as a non-residential transmission or primary voltage Customer (as defined in Paragraph XVI.); and (ii) who elects and who – as of the date of service for Customer under this Schedule – is receiving Electricity Supply Service and Electric Delivery Service from the Company under Schedule GS-4 at the Customer's service location; and (iii) whose peak measured demand has reached or exceeded 5,000 kW during at least three (3) billing months within the current and previous 11 billing months at the Customer's service location; and (iv) who has taken service from the Company for at least 12 consecutive billing months at the Customer's service location; and (v) whose Monthly Load Factor at the Customer's service location averages at least 85% for the current and previous 11 billing months, where such Monthly Load Factor is calculated in accordance with Paragraph XII., below.
- B. The Company must receive the Customer's request for service at the Customer's service location in accordance with this Schedule, prior to November 1, 2019, when this Schedule shall close to additional Customers ("Closure Date"). In addition, all of the criteria in Paragraph I.A. and Paragraph I.C. of this Schedule must be satisfied in sufficient time for the Customer to begin receiving service under this Schedule at the Customer's service location on or prior to January 1, 2020. Unless earlier terminated in accordance with Paragraph XIX. below, this Schedule shall be withdrawn from service on December 31, 2022 and shall no longer be available to the Customer at the Customer's service location. Upon such termination or withdrawal, the Customer shall select an applicable, alternative Rate Schedule.
- C. This Schedule is available only after all of the following criteria are met:
1. The Company has installed metering equipment that it deems to be necessary to measure properly the Customer's demands and energy usage at the Customer's service location; and
  2. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment; and
  3. The Customer has submitted to the Company a notarized *Officer Certification Affidavit for Rate Schedule MBR- GS-4* ("Affidavit") which acknowledges that the Customer's representative who signs such Affidavit is a duly authorized officer and understands the terms and conditions under which the Customer will be billed in accordance with this Schedule.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

I. APPLICABILITY AND AVAILABILITY (Continued)

4. The Company may require up to sixty (60) days after all of the criteria in Paragraph I.B., above, are met to provide service to the Customer under this Schedule.
- D. This Schedule, together with Schedule MBR - GS-3 (Experimental), is subject to a combined aggregate cap of 200 MW of participating Customer load served in accordance with Schedules GS-3 and GS-4, collectively. To determine whether a Customer can take service under this Schedule, the Company shall determine the aggregate load for both (i) the currently participating Customers on this Schedule and Schedule MBR - GS-3 (Experimental) and (ii) for the additional Customer requesting service under this Schedule. Such aggregate load shall be the sum of the loads for all such Customers (i.e., currently participating and additional Customers), based upon the higher of the Customers' (i) actual peak measured demands at their service locations, during the current and previous 11 billing months immediately prior to the date of service for the additional Customer under this Schedule or (ii) the anticipated kW demands in the Customers' load letters for their service locations, if applicable.

II. 30-DAY RATE

A. Distribution Service Charges

1. Basic Customer Charge  
Basic Customer Charge \$127.60 per billing month.
2. Plus Distribution Demand Charge
 

First 5000 kW of Distribution Demand	@	\$1.000 per kW
Additional kW of Distribution Demand	@	\$0.755 per kW
3. Plus rkVA Demand Charge
 

	@	\$0.15 per rkVA
--	---	-----------------
4. Plus Distribution kWh Charges
  - a. Distribution kWh Charge for All Customers
 

All kWh	@	0.006¢ per kWh
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  - b. Plus Distribution kWh Charge for Non-exempt or Non-opt-out Customers
 

All kWh	@	0.000¢ per kWh
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5. Plus each Distribution kilowatthour used is subject to all applicable riders, included in the Exhibit of Applicable Riders.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

151110038

(Continued)

II. 30-DAY RATE (Continued)

B. Market-based Rate Charges

1. Generation Demand Charge  
All kW of Generation Demand @ Generation Demand Billing  
Rate per kW
2. Plus Generation Energy Charge  
All kWh @ Day-Ahead LMP per kWh
3. Plus PJM Ancillary Service Charges

Any reference to "PJM" in this Schedule means the PJM Interconnection, LLC (Pennsylvania-New Jersey-Maryland Interconnection, LLC), or any successor, that is the regional transmission organization and is part of the Eastern Interconnection grid that operates an electric transmission system.

- a. PJM Ancillary Service Charges for the current billing month, for which the Customer shall be charged, shall include all PJM ancillary service charges assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-4 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM ancillary service charges are not already included in Company's Schedule GS-4 Transmission kW Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-4. Currently, PJM Ancillary Service Charges include – but may not be limited now or in the future to – Day-Ahead and Balancing Operating Reserves, Day-Ahead Scheduling Reserves, Reactive Service and Reactive Supply & Voltage Control, Black Start and Regulation & Frequency Response, Synchronized Reserves, and Synchronous Condensing Charges. In the event of any future change in PJM's process for determining ancillary service charges, including any modification as to which ancillary services are included, this ancillary service charge shall represent the similar or like charges for ancillary service determined by PJM.

(Continued)



SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

151110038

(Continued)

II. 30-DAY RATE (Continued)

- b. For PJM Ancillary Service Charges, the Company will determine for the current billing month a monthly rate in \$/kWh by taking such total monthly Dominion LSE ("DOMLSE") charges divided by total monthly DOMLSE kWh energy consumption (the "PJM Ancillary Service Charges Factor"). The Company will bill the PJM Ancillary Service Charges to the Customer based on the Customer's actual total monthly kWh energy consumption, grossed up for kWh losses, for the current billing month multiplied by the PJM Ancillary Service Charges Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

4. Plus PJM Administrative Fees

- a. PJM Administrative Fees for the current billing month shall include all PJM administrative fees assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-4 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM administrative fees are not already included in the Company's Schedule GS-4 Transmission Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-4. In the event of any future change in PJM's process for determining administrative fees, including any modification as to what is being represented in the administrative fees, this administrative fees charge shall represent the similar or like charges for administrative fees determined by the PJM.
- b. For PJM Administrative Fees, the Company will determine for the current billing month a monthly rate in \$/kWh by taking such total monthly Dominion LSE ("DOMLSE") administration fee divided by total monthly DOMLSE kWh energy consumption (the "PJM Administrative Fees Factor"). The Company will bill PJM Administrative Fees to the Customer based on the Customer's actual total monthly kWh energy consumption, grossed up for kWh losses, for the current billing month multiplied by the PJM Administrative Fees Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

II. 30-DAY RATE (Continued)

- c. In the event that PJM assigns any new costs to the loads of the Company, which are not considered to be PJM Ancillary Services or PJM Administrative Fees, in the future for the Customer's total monthly kWh energy consumption, grossed up for kWh losses, during this Schedule's Term of Contract, pursuant to Paragraph XIX., below, the Company and the Customer mutually agree that the Company shall bill and the Customer shall pay to the Company such new PJM costs. The Company shall include any and all such new PJM costs in with the PJM Administrative Fees as described in this Paragraph II.B.4., above.

5. Plus Margin

- a. The Customer shall pay to the Company a Margin for each kWh of Customer's total monthly energy consumption during the current billing month.
- b. Such Margin for the current billing month shall be based on the Customer's Monthly Load Factor, which the Company will calculate in accordance with Paragraph XII., below. The Customer's Monthly Load Factor at the Customer's service location shall determine the applicable Margin rate per kWh in accordance with the table below:

Customer's Monthly Load Factor	Margin Rate per kWh
$\geq 85\%$	\$0.00115
$< 85\%$	$[\$0.00115 + ((85 - \text{Monthly Load Factor}) * \$0.00005)]$

- c. The Company shall disregard any Test Demand, as determined in Paragraph XIII., in calculating the Customer's Monthly Load Factor. In place of the Test Demand, the Company shall use the highest Non-Test Demand in the current billing month to determine the Customer's Monthly Load Factor.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

II. 30-DAY RATE (Continued)

C. Electricity Supply (ES) Service Charges

1. Transmission Demand Charge

- a. All On-peak Electricity Supply Demand for  
Primary Service Voltage @ \$ 2.371 per kW
- b. All On-peak Electricity Supply Demand for  
Transmission Service Voltage @ \$ 2.310 per kW

2. Plus each kW of On-Peak Electricity Supply Demand, determined pursuant to Paragraph X., below, is subject to all applicable transmission riders, included in the Exhibit of Applicable Riders.

D. As this Schedule is a companion schedule to Schedule GS-4, the Total Charges billed to the Customer by the Company for services under this Schedule shall be equal to the Total Schedule GS-4 Charges plus the Net Market-based Rate Charges, as described more fully below.

Where:

1. Total Schedule GS-4 Charges shall be equal to the higher of the following:

- a. The sum of the following:
  - i. Schedule GS-4 Distribution Service Charges (see Paragraph II.A. of Schedule GS-4), which include all applicable riders; plus
  - ii. Schedule GS-4 Electricity Supply Service Charges (see Paragraph II.B. of Schedule GS-4), which include all applicable riders; or
- b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.

(Continued)

151120038

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

II. 30-DAY RATE (Continued)

2. Total Schedule MBR - GS-4 Charges shall be equal to the higher of the following:
  - a. The sum of the following:
    - i. Distribution Service Charges, which include all applicable riders, in Paragraph II.A. of this Schedule; plus
    - ii. Market-based Rate Charges in Paragraph II.B. of this Schedule; plus
    - iii. Electricity Supply Service Charges, which include all applicable transmission riders, in Paragraph II.C. of this Schedule; or
  - b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.
3. Net Market-based Rate Charges shall be equal to the Total Schedule MBR - GS-4 Charges minus the Total Schedule GS-4 Charges.

III. DETERMINATION OF DISTRIBUTION DEMAND

- A. The Distribution Demand shall be billed only where the normal service delivery voltage is less than 69 kV.
- B. The Distribution Demand billed under Paragraph II.A.2 shall be such as may be contracted for but not less than the highest of:
  1. The highest average kW measured at the location during any 30-minute interval of the current and previous 11 billing months.
  2. 500 kW.
- C. When the Customer's power factor at the Customer's service location is less than 85 percent, a minimum distribution demand of not less than 85 percent of the Customer's maximum kVA demand may be established.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

151110038

(Continued)

IV. DETERMINATION OF rkVA DEMAND

The rkVA of demand billed shall be the highest average rkVA measured at the Customer's service location in any 30-minute interval during the current billing month.

V. EXEMPTION AND OPT-OUT PROVISIONS FOR DISTRIBUTION KWH CHARGE

The Distribution kWh Charge in Paragraph II.A.4.b., above, shall not apply to Customers who are either exempt from or opt-out of such charge pursuant to Virginia Code § 56-585.1 A 5 c.

VI. DETERMINATION OF GENERATION DEMAND

- A. The Generation Demand billed in Paragraph II.B.1., above, shall be the higher of the following, which also shall be subject to adjustment for losses and reserves, as provided for in Paragraph VI.B., below:
1. The Customer's highest average 30-minute kW of demand measured by the Company during the current billing month ("Maximum kW of Demand"); or
  2. The Customer's contribution to PJM's peak load (currently the average of the five (5) coincident peaks ("5CPs") of the prior Summer) shall be determined in accordance with PJM's rules for the PJM Delivery Year ("Delivery Year") prior to the current Delivery Year. In the event of any future change in PJM's process for determining the Customer's contribution to PJM peak load, the Customer's contribution to PJM's peak load shall represent the similar or like method used by PJM for determining Customer's contribution to PJM's peak load.
- B. Such kW of demand determined in Paragraph VI.A., above, shall be grossed up for losses and reserves, which are applicable to the Customer's service location. Such losses and reserves shall be calculated by the Company and updated annually.
- C. The adjustment for losses in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.A., above, shall represent the Company's average distribution and transmission loss adjustment factor for providing capacity to serve a Schedule GS-4 customer's load.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

151120038

(Continued)

VI. DETERMINATION OF GENERATION DEMAND (Continued)

- D. The adjustment for reserves in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.C., above, shall represent the Company's required reserves based upon the volumes procured and/or assigned to the Company's load by PJM, as defined by the underlying PJM structure for acquiring capacity for load in PJM. In the event of any future change in PJM's process for determining the Company's reserve requirement for load, the required reserves shall represent the similar or like method used by PJM for determining the Company's required reserves for acquiring capacity for load in PJM.
- E. The resulting kW of demand, determined in accordance with Paragraph VI. of this Schedule, shall be the Generation Demand.

VII. DETERMINATION OF GENERATION DEMAND BILLING RATE

The Generation Demand Billing Rate for the current billing month shall be equal to the PJM Final Zonal Net Load Price in \$/MW-Day multiplied by the number of days in the current billing month and shall represent the price reflective of the cost to procure capacity in the PJM market to serve the Customer's Generation Demand at the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure capacity for load in the PJM market to serve the Customer's Generation Demand, the Generation Demand Billing Rate shall represent the similar or like method used by PJM for determining the Generation Demand Billing Rate.

VIII. DETERMINATION OF GENERATION ENERGY

The Generation Energy billed in Paragraph II.B.2, above, shall be the Customer's total monthly kWh energy consumption for the current billing month grossed up for the appropriate distribution losses for a Schedule GS-4 customer.

IX. DETERMINATION OF DAY-AHEAD LMP

The Day-ahead LMP used to bill the Customer's Generation Energy in Paragraph II.B.2, above, shall mean the respective hourly PJM Day-Ahead Locational Marginal Price ("LMP") for the applicable PJM load zone, or any successor thereto, which includes the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure energy in the PJM market to serve the Customer's Generation Energy, the Day-ahead LMP shall represent the similar or like method used by PJM for determining the Day-ahead LMP.

(Continued)

Filed 11-03-15  
Electric-Virginia

This Filing Effective For Usage On and After the First Day of the Month  
Following Commission Approval but not to Exceed Sixty (60) Days  
Following the Date of the Commission's Final Order In The Proceeding.

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

(Continued)

X. DETERMINATION OF ON-PEAK ELECTRICITY SUPPLY DEMAND

The kW of demand billed under Paragraph II.C.1.a. and Paragraph II.C.1.b., above, shall be the highest of:

- A. The highest average kW measured in any 30-minute interval of the current billing month during on-peak hours.
- B. Seventy-five percent of the highest kW of demand at the Customer's service location as determined under Paragraph X.A., above, during the billing months of June through September of the preceding 11 billing months.
- C. 100 kW.

XI. DETERMINATION OF ON-PEAK AND OFF-PEAK HOURS

The following on-peak and off-peak hours are applicable to the billing of the Electricity Supply Service Charges in Paragraph II.C., above.

- A. On-peak hours are as follows:
  - 1. For the period of June 1 through September 30, 10 a.m. to 10 p.m., Mondays through Fridays.
  - 2. For the period of October 1 through May 31, 7 a.m. to 10 p.m., Mondays through Fridays.
- B. All hours not specified in Paragraph XI.A. are off-peak.

XII. DETERMINATION OF MONTHLY LOAD FACTOR

The Company shall calculate the Customer's Monthly Load Factor for the current billing month at the Customer's service location, using the following formula:

Monthly Load Factor = Total kWh ÷ (24 \* Maximum kW of Demand \* Days)

Where:

Total kWh = Customer's actual monthly total kWh energy consumption for the current billing month;

24 = 24 hours per day;

Maximum kW of Demand = the demand determined for the current billing month in accordance with Paragraph VI.A.1., above;

Days = the number of days in the current billing month.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

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(Continued)

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND

A. Periodically, the Customer may have to conduct equipment testing at the Customer's service location. Customer's equipment testing that may result in the establishment of an abnormally high average 30-minute peak measured demand ("Peak Demand") during one or more billing months at the Customer's service location. The Company will disregard the Peak Demand for the purposes of calculating the Customer's Monthly Load Factor and the Customer's Margin, in accordance with Paragraph II.B.5., above, for the current billing month when *all* of the following criteria are met:

1. Customer conducted the equipment testing at the Customer's service location; and
2. The Customer's notification to the Company and conduct of the equipment testing were in accordance with the provisions of the *Customer's Equipment Testing Agreement*; and
3. The Customer's Peak Demand was established during the date(s) and time(s) identified by the Customer on the "Official Test Schedule," which was submitted to the Company pursuant to the *Customer's Equipment Testing Agreement*; and
4. The Company approved the Customer's Peak Demand to be a Test Demand, using the provisions of the *Customer's Equipment Testing Agreement*.

The Company shall disregard any Test Demand for the Customer only from the calculation of the Customer's Monthly Load Factor for the purposes of the calculating the Customer's Margin during the current billing month.

B. Using the Company's meter data records, the Company will determine the Customer's highest average 30-minute measured peak demand outside of the dates and times listed on the "Official Test Schedule" as the Customer's Non-Test Demand for the current billing month at the Customer's service location. The Company shall use the Customer's Non-Test Demand to calculate the Customer's Monthly Load Factor for the purposes of calculating the Customer's Margin, in accordance with Paragraph II.B.5., above.

(Continued)



SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

151110038

(Continued)

XIV. METER READING AND BILLING AND PAYMENT

- A. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment. Such communication technology shall be provided to the Company's metering equipment at the Customer's own expense.
- B. When the actual number of days between meter readings is more or less than 30 days, the Basic Customer Charge, the Distribution Demand Charge, the rkVA Demand Charge, the Transmission Demand Charge, and the minimum charge of the 30-day rate will each be multiplied by the actual number of days in the billing period and divided by 30. Billing and payment shall be made concurrent with billing under Schedule GS-4.

XV. STANDBY, MAINTENANCE OR PARALLEL OPERATION SERVICE

A Customer requiring standby, maintenance or parallel operation service may elect service under this Schedule provided the Customer contracts for the maximum kW which the Company is to supply. Standby, maintenance or parallel operation service is subject to the following provisions:

- A. Suitable relays and protective apparatus shall be furnished, installed, and maintained at the Customer's expense in accordance with specifications furnished by the Company. The relays and protective equipment shall be subject, at all reasonable times, to inspection by the Company's authorized representative.
- B. In case the Distribution Demand determined under Paragraph III, exceeds the contract demand, the contract demand shall be increased by such excess demand.
- C. The demand billed under Paragraph II.A.2 shall be the contract demand.

XVI. DEFINITION OF TRANSMISSION, PRIMARY AND SECONDARY VOLTAGE CUSTOMER

- A. A transmission voltage Customer is any Customer whose delivery voltage is 69 kV or above and is the voltage that is generally available in the area.
- B. A primary voltage Customer is any Customer (a) served from a circuit of 69 kV or more where the delivery voltage is 4,000 volts or more, (b) served from a circuit of less than 69 kV where Company-owned transformation is not required at the Customer's site, (c) where Company-owned transformation has become necessary at the Customer's site because the Company has changed the voltage of the circuit from that originally supplied, or (d) at a location served prior to October 27, 1992 where the Customer's connection to the Company's facilities is made at 2,000 volts or more.

(Continued)

SCHEDULE MBR - GS-4  
LARGE GENERAL SERVICE  
PRIMARY VOLTAGE  
(EXPERIMENTAL)

151110038

(Continued)

XVI. DEFINITION OF TRANSMISSION, PRIMARY AND SECONDARY VOLTAGE  
CUSTOMER (Continued)

- C. A secondary voltage Customer is any Customer not defined in Paragraph XVI.A. or Paragraph XVI.B. as a transmission or primary voltage Customer.

XVII. CUSTOMER AUTHORIZATION

The Customer authorizes the Company to allow its Energy Supply personnel to have full access to the Customer's specific load, pricing, and any other necessary Customer-specific information during the Term of Contract. Such authorization will allow the Company's Energy Supply personnel to support certain Company-specific activities resulting from Customer's participation on this Schedule.

XVIII. PERIODIC REVISION OF RATES

The rates contained in this Schedule and in all the applicable riders for this Schedule are subject to change from time-to-time by order of the Commission. The rates for the currently-effective Rate Schedules and all the applicable riders are available on the Company's Internet website.

XIX. TERM OF CONTRACT

- A. The term of contract for the purchase of Electric Service under this Schedule shall be as mutually agreed upon, but for not less than three (3) years. Any Customer electing to transition service to this Schedule shall remain on this Schedule for a minimum of three (3) years, continuing thereafter for additional one-year terms unless either the Company or the Customer provides the other party with written notice of termination at least sixty (60) days prior to the end of the then-current term.
- B. Notwithstanding the provisions of Paragraph XIX.A., above, and after the conclusion of the Customer's initial three-year term under this Schedule, the Customer may renew this Schedule for service at the Customer's service location for only one additional one-year term after the Closure Date, pursuant to Paragraph I.B. of this Schedule.
- C. This Schedule shall be withdrawn from service on December 31, 2022 and shall no longer be available to the Customer at the Customer's service location.

Sep 1, 2015

MBR CUSTOMER

## Customer Bill

SERVICE ADDRESS 1  
SERVICE ADDRESS 2  
SERVICE ADDRESS 3

## SAMPLE BILL IMAGE

## Billing and Payment Summary

Account # 999999999 Due Date: Sep 25, 2015

Total Amount Due: \$ 681,177.24

To avoid a Late Payment Charge of 1.5% please pay by Sep 25, 2015.

Previous Amount Due: \$ 681,177.24

Payments as of Sep 1: \$ 681,177.24CR

For service emergencies and power outages please call  
1-866-DOM-HELP (1-866-366-4357). Visit us at [www.dom.com](http://www.dom.com).

## Meter and Usage

## Usage History

Current Billing Days: 31

Billable Usage	08/01-08/31
Schedule GS-3	7696872
Off Pk Usage	4539168
On Pk Usage	12236040
Total kWh	16446.0
Dlst Demand	1644.0
Off Pk Dem	16446.0
On Pk Demand	7965.0
RKVA	
Measured Usage	
Meter: 00RG999999	08/01-08/31
On Pk Usage	4539168
Off Pk Dem	16446.3
On Pk Dem	16446.3
RKVA	7965.0

Mo	Yr	kWh
Aug	14	12236040
Sep	14	12236040
Oct	14	12236040
Nov	14	12236040
Dec	14	12236040
Jan	15	12236040
Feb	15	12236040
Mar	15	12236040
Apr	15	12236040
May	15	12236040
Jun	15	12236040
Jul	15	12236040
Aug	15	12236040

## Explanation of Bill Detail

Customer Service	1-866-591-0157
Previous Balance	681,177.24
Payment Received	681,177.24CR
Balance Forward	0.00
Non-Residential Service (Schedule GS-3)	08/01-08/31
Distribution Service	
Basic Customer Charge	123.79
kVA Demand	1,234.58
Distribution Demand	36,027.70
Distribution Service kWh	856.52
Rider C1A Peak Shaving	244.72CR
Electricity Supply Svc (ESS)	
Adjustment Charge	10,876.29CR
On Peak Energy Chg	18,338.24
Off Peak Energy Chg	20,935.49
On Peak Demand Chg	192,408.33
Off Peak Demand Chg	1,114.41
Transmission Demand Chg	38,695.79
Fuel	294,389.12
Rider R Bear Garden Gen Station	8,361.15
Rider S Va City Hybrid Energy Ctr	24,488.64
Rider B Biomass Conversions	883.70
Rider W Warren Co Power Station	13,493.39
Rider BW Brunswick Co Pwr Station	9,414.79
Rider T1 Transmission	18,353.74
Net Schedule MBR- GS-3 Charge	7,609.86CR
Sales and Use Surcharge	6,852.18
Dist. Fac. Chg. (VA;V.E.3.A)	4,787.00
State/Local Consumption Tax	9,067.55
LOCAL Utility Tax	72.00
Total Current Charges	681,177.24
Total Account Balance	681,177.24

View payment options, request service changes and enroll in eBill at  
[www.dom.com](http://www.dom.com), search: Manage Your Account

## SCHEDULE GS-3 BILL EXAMPLE

Page 1 of 2

SCHEDULE GS-3 BILL AMOUNT	\$668,008.37
Contract Minimum Demand	16,446
Contract Minimum Dollar Amount	\$334,123.20
Days in Billing Period	31
Distribution Demand	16,446
rkVA Demand	7,965
All kWh	12,236,040
On-peak ES kW	16,446.3
Measured Off-Peak Demand	16,446.3
On-peak ES kW * 0.8	14,801.7
Off-peak ES kW	1,644
On-peak ES kWh	4,539,168
Off-peak ES kWh	7,696,872
Distribution Svc %:	6%
Elec. Supp. Svc %:	94%

## SAMPLE ONLY

Charges Follow the Order of the Bill Image

## Distribution Service Charges:

## Basic Customer Charge

\$119.80 *	*	31 / 30 =	\$123.79
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## rkVA Demand Charge (All rkVA)

7,965 *	\$0.15 per rkVA	*	31 / 30 =	\$1,234.58
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Distribution Demand Charge  
(All kW of Distribution Demand)

16,446 *	\$2.120 per kW	*	31 / 30 =	\$36,027.70
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## Distribution Service kWh Charge for All Customers (All kWh)

12,236,040 *	\$0.00007 per kWh	=	\$856.52
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## Distribution Service kWh Charge for Non-exempt, Non-opt-out Customers (All kWh)

0 *	\$0.00000 per kWh	=	\$0.00	Zero charge does not appear on the bill
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## Rider C1A - Demand-Side Management Peak-Shaving Charge (All kWh)

12,236,040 *	-\$0.00002 per kWh	=	-\$244.72
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## Rider C2A - Demand-Side Management Energy Efficiency Charge (All kWh)

0 *	\$0.00050 per kWh	=	\$0.00	Zero charge does not appear on the bill
-----	-------------------	---	--------	---

(Continued)

## SCHEDULE GS-3 BILL EXAMPLE (Continued)

Page 2 of 2

**SAMPLE ONLY**Electricity Supply (ES) Service Charges:Generation Adjustment Demand Charge  
(All kW of Demand)

16,446 \*      -\$0.640 per kW      \*      31 /    30 =      -\$10,876.29

All On-peak ES kWh Charge

4,539,168 \*      \$0.00404 per kWh      =      \$18,338.24

All Off-peak ES kWh Charge

7,696,872 \*      \$0.00272 per kWh      =      \$20,935.49

On-peak Generation Demand Charge  
(All On-peak ES kW)

16,446 \*      \$11.322 per kW      \*      31 /    30 =      \$192,408.33

Off-peak Generation Demand Charge  
(All Off-peak ES kW)

1,644 \*      \$0.656 per kW      \*      31 /    30 =      \$1,114.41

Transmission Demand Charge (All On-peak ES kW)

16,446 \*      \$2.277 per kW      \*      31 /    30 =      \$38,695.79

Fuel Charge Rider A (All kWh)

12,236,040 \*      \$0.02406 per kWh      =      \$294,399.12

Rider R - Bear Garden Generating Station  
(All On-peak ES kW)

16,446 \*      \$0.492 per kW      \*      31 /    30 =      \$8,361.15

Rider S - Virginia City Hybrid Energy Center  
(All On-peak ES kW)

16,446 \*      \$1.441 per kW      \*      31 /    30 =      \$24,488.64

Rider B - Biomass Conversions  
(All On-peak ES kW)

16,446 \*      \$0.052 per kW      \*      31 /    30 =      \$883.70

Rider W - Warren County Power Station  
(All On-peak ES kW)

16,446 \*      \$0.794 per kW      \*      31 /    30 =      \$13,493.39

Rider BW - Brunswick County Power Station  
(All On-peak ES kW)

16,446 \*      \$0.554 per kW      \*      31 /    30 =      \$9,414.79

Rider T1 - Transmission (All On-peak ES kW)

16,446 \*      \$1.080 per kW      \*      31 /    30 =      \$18,353.74

Subtotal

\$668,008.37

Contract Minimum Dollar Amount

\$334,123.20

Rate Schedule GS-3 Total Bill Amount

**\$668,008.37**

151110038

**SAMPLE ONLY**

August 1 - 31, 2015 Rate Schedule GS-3 Half-Hourly Interval Data

Type of Day	Date	Half-Hour Beginning										
		0:00	0:30	1:00	1:30	2:00	2:30	3:00	3:30			
Weekend	8/1/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/2/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/3/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/4/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/5/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/6/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/7/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/8/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/9/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/10/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/11/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/12/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/13/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/14/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/15/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/16/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/17/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/18/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/19/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/20/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/21/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/22/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/23/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/24/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/25/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/26/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/27/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/28/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/29/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekend	8/30/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			
Weekday	8/31/2015	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145	8223.145			

GS-3 On-peak kW	16,446.3	0	0	0	0	0	0	0	0	0	0	0
GS-3 Off-peak kW	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3	16,446.3
GS-3 Total On-peak kWh	4,539,168	0	0	0	0	0	0	0	0	0	0	0
GS-3 Total Off-peak kWh	7,696,872	254,917	254,917	254,917	254,917	254,917	254,917	254,917	254,917	254,917	254,917	254,917
GS-3 Total kWh	12,236,040											

(Continued)

Denotes Off-peak Hours

## August 1 - 31, 2015 Rate Schedule GS-3 Half-Hourly Interval Data

WILLIAMS

[illegible]

(Continued)

## August 1 - 31, 2015 Rate Schedule GS-3 Half-Hourly Interval Data

[illegible]

Company Exhibit No.  
Witness: GJM  
Direct Schedule 3  
Page 6 of 21

351103



## August 1 - 31, 2015 Rate Schedule GS-3 Half-Hourly Interval Data

# THE

[illegible]

(Continued)

## August 1 - 31, 2015 Rate Schedule GS-3 Half-Hourly Interval Data

7511-1

[illegible]

## COMPANION RATE SCHEDULE MBR - GS-3 BILL EXAMPLE

Page 1 of 2

COMPANION RATE SCHEDULE MBR - GS-3	\$660,398.51
Contract Minimum Dollar Amount	\$334,123.20
Contract Minimum Demand	14,000
Days	31
Distribution Demand	16,446
rkVA Demand	7,965
All kWh (Not Grossed Up)	12,236,040
Generation Energy Gross-up Factor	1.0397
Andillary Service Charges Gross-up Factor	1.0552
PJM Admin Fees Gross-up Factor	1.0552
Metered On-Peak kW	16,446.3
Metered Off-Peak kW	16,446.3
Coincident Peak No. 1	16,000
Coincident Peak No. 2	16,000
Coincident Peak No. 3	16,000
Coincident Peak No. 4	16,000
Coincident Peak No. 5	16,000
Average of 5 Coincident Peaks	16,000
On-peak ES kW	16,446
Distribution Svc %:	6%
Market-Rate Charges	86%
Eloc. Supp. Svc %:	8%

Distribution and Transmission Charges Follow the Order of  
the Bill Image

# SAMPLE ONLY

## Distribution Service Charges:

## Basic Customer Charge

\$119.80

\* 31 / 30 = \$123.79

## rkVA Demand Charge (All rkVA)

7,965 \*

\$0.15 per rkVA

\* 31 / 30 = \$1,234.58

Distribution Demand Charge  
(All  
kW of Distribution Demand)

16,446 \*

\$2.120 per kW

\* 31 / 30 = \$36,027.70

## Distribution kWh Charge for All Customers (All kWh)

12,236,040 \*

\$0.00007 per kWh

= \$856.52

Distribution kWh Charge for Non-exempt or Non-opt-out  
Customers (All kWh)

0 \*

\$0.00000 per kWh

=

Zero charge does  
not appear on the  
bill

## Rider C1A - Demand-Side Management Peak Shaving (All kWh)

12,236,040 \*

-\$0.00002 per kWh

=

-\$244.72

Rider C2A - Demand-Side Management Energy Efficiency -  
Over 10 MW Exempt (All kWh)

0 \*

\$0.00050 per kWh

=

Zero charge does  
not appear on the  
bill

(Continued)

151110038

COMPANION RATE SCHEDULE MBR - GS-3 BILL EXAMPLE (Continued)

Page 2 of 2

Market-based Rate Charges:

Generation Demand

1: Highest 30 min. kW in current billing month:

16,446

2: Average of 5 CPs

16,000

3: Higher of 1 or 2 above

16,446

4: Adjustment for losses:

17,740

5: Adjustment for Reserves

20,365

6: Generation Demand (All kW of Generation Demand)

20,365 \*

Generation Energy (All kWh Grossed Up)

12,721,811

**SAMPLE ONLY**

7.297% Loss Percentage

14.8% Reserve Percentage

\$0.13581 per kW-day \* 31 = \$85,738.89

@ Day Ahead LMP per Paragraph IX. = \$441,435.06

Ancillary Service Charges (All kWh Grossed Up)

12,911,469 \*

\$0.001535 per kWh = \$19,819.10

PJM Admin Fees (All kWh Grossed Up)

12,911,469 \*

\$0.000332 per kWh = \$4,286.61

Margin (All kWh)

12,236,040 \*

100.0% LF

\$0.00116 per kWh = \$14,071.45

Electricity Supply (ES) Service Charges:

Transmission Demand Charge

16,446 \*

\$2.277 per kW \* 31 / 30 = \$38,695.79

Rider T1 - Transmission

16,446 \*

\$1.080 per kW \* 31 / 30 = \$18,353.74

Subtotal

\$660,398.51

Contract Minimum Dollar Amount

\$334,123.20

Total MBR - GS-3 Charges:

\$660,398.51

Net Market based Rate Charges = Sum of the Following:

• Total MBR - GS-3 Charges Less

\$660,398.51

• Total GS-3 Charges

\$668,008.37

Net Market Based Rate Charges =

-\$7,609.86

# **SAMPLE ONLY - Not Grossed Up**

August 1 - 31, 2015 Rate Schedule MBR - GS-3 Hourly Interval Data to Determine Total kWh Usage

Type of Date	Date	Hour Beginning				
		0:00	1:00	2:00	3:00	5:00
Weekend	8/1/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/2/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/3/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/4/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/5/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/6/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/7/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/8/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/9/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/10/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/11/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/12/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/13/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/14/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/15/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/16/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/17/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/18/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/19/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/20/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/21/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/22/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/23/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/24/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/25/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/26/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/27/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/28/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/29/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekend	8/30/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Weekday	8/31/2015	16446.29	16446.29	16446.29	16446.29	16446.29
Daily Total kWh		16446.29	16446.29	16446.29	16446.29	16446.29

Total Monthly kWh 12,236,040

(Continued)

### August 1 - 31, 2015 Rate Schedule MBR - GS-3 Hourly Interval Data to Determine Total kWh Usage

[illegible]

(Continued)

### August 1 - 31, 2015 Rate Schedule MBR - GS-3 Hourly Interval Data to Determine Total kWh Usage

[illegible]

# **SAMPLE ONLY - Grossed Up**

August 1 - 31, 2015 Rate Schedule MBR - GS-3 Hourly Interval Data to Determine Total kWh Usage

10397

Type of Date	Date	Hour Beginning	0:00	1:00	2:00	3:00	4:00	5:00
Weekend	8/1/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/2/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/3/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/4/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/5/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/6/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/7/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/8/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/9/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/10/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/11/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/12/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/13/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/14/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/15/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/16/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/17/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/18/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/19/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/20/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/21/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/22/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/23/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/24/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/25/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/26/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/27/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/28/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/29/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekend	8/30/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Weekday	8/31/2015		17099.20771	17099.20771	17099.20771	17099.20771	17099.20771	17099.20771
Daily Total kWh			530,075	530,075	530,075	530,075	530,075	530,075

Total Monthly kWh 12,721,811

(Continued)



## 1,0397

1,0397

[illegible]

(Continued)

**SAMPLE ONLY**

Indicative Pricing for August 1 - 31, 2015 PJM Day-Ahead Locational Marginal Price ("LMP") for the Applicable PJM Load Zone

Hour Beginning													
Date	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	
8/1/2015	24.05046	23.56688	22.34391	20.00648	19.80395	23.17915	24.28895	25.71003	26.78247	29.21504	33.17164	33.76563	
8/2/2015	23.80668	22.56805	20.26749	18.06688	18.13709	22.59303	24.24218	25.96942	27.32093	28.55774	31.46047	31.97106	
8/3/2015	20.35267	18.21953	14.17447	12.28273	12.48632	15.42977	16.89482	19.50242	23.56209	26.16075	27.19249	27.78779	
8/4/2015	18.67505	13.01366	10.31636	9.74131	8.99142	9.03913	8.55816	11.4875	21.93188	25.4564	26.7179	27.8996	
8/5/2015	20.77342	14.12199	13.23895	9.73006	10.10937	9.72682	9.35172	13.11156	22.63734	25.75653	26.4644	29.35553	
8/6/2015	21.48068	19.8154	19.69684	18.72663	18.76093	19.95677	23.42107	24.63526	26.353	29.03162	31.26189	35.81757	
8/7/2015	22.63016	19.86239	18.54705	17.15371	17.25061	19.76305	22.2652	23.4229	24.77691	28.29392	30.98806	34.77278	
8/8/2015	23.1564	21.59156	18.78683	16.65749	16.88766	20.14914	22.79453	23.99626	26.20952	30.39769	35.08414	36.10841	
8/9/2015	23.08615	22.48731	19.64626	17.67466	17.416	20.97648	23.11134	23.91635	24.92825	27.65523	29.44529	33.75405	
8/10/2015	24.18464	22.83109	19.09434	18.03802	18.46936	20.87777	24.19299	24.12182	24.65871	26.76117	28.87172	31.55575	
8/11/2015	25.29018	24.97077	23.65051	22.09054	20.96892	21.59242	21.29063	23.6498	26.18984	27.09238	29.7945	31.63834	
8/12/2015	23.72307	22.27494	20.387	17.48604	14.2203	14.19572	15.05208	20.21316	24.85173	26.25267	29.86574	32.56415	
8/13/2015	23.59515	23.76223	23.24122	21.69481	22.71675	23.98353	24.82046	25.55159	28.58832	32.38719	34.96837	39.31355	
8/14/2015	24.46751	23.80997	24.14687	23.27398	23.05037	24.13677	24.75266	26.99853	29.68984	31.49753	41.19326	40.79583	
8/15/2015	24.784	23.65288	22.53498	21.8396	21.8155	23.84854	25.45192	26.76548	28.06008	30.58262	36.19183	37.20145	
8/16/2015	24.31438	22.96867	19.81688	17.12983	17.50232	21.79647	25.57179	26.48495	26.80854	28.41361	30.99324	31.65951	
8/17/2015	25.84391	25.07252	23.12574	20.9482	21.23622	25.29028	27.26765	27.90645	29.31626	32.17168	36.10723	34.52935	
8/18/2015	28.82572	26.68615	25.95157	25.80552	25.43039	26.0357	26.53918	28.0636	30.70254	36.17052	40.28048	44.53511	
8/19/2015	27.0878	25.70427	24.07241	22.93762	22.12746	22.79811	23.4413	25.07076	28.46488	30.63535	37.45304	41.09626	
8/20/2015	27.97046	25.45284	24.51835	24.44038	24.45853	25.48354	28.37489	31.40596	34.12428	40.38914	44.86832	45.29288	
8/21/2015	30.45811	28.06425	25.50131	23.70925	23.76438	25.63634	29.6401	31.62725	33.65994	38.29735	41.68521	45.77638	
8/22/2015	26.7022	25.22388	22.42044	21.08893	22.86144	25.12653	26.74336	27.75897	28.10308	30.38353	36.29179	35.82765	
8/23/2015	25.39038	24.11516	21.08549	19.72364	19.97198	23.60016	26.94555	26.97257	28.70353	30.64701	34.73583	35.53814	
8/24/2015	25.10274	24.37275	21.63406	20.52579	21.03823	23.89319	26.43573	26.98563	27.75621	31.08859	38.32249	40.75736	
8/25/2015	25.20241	24.40696	21.43129	18.62852	17.5625	17.88269	19.57151	24.15728	26.62686	28.04092	33.43279	38.71571	
8/26/2015	24.72846	23.83866	21.89863	18.61106	17.02047	16.88349	18.21154	23.05322	25.44246	26.90813	31.31962	36.42192	
8/27/2015	23.43608	23.36844	22.8673	21.32122	21.54473	23.61411	24.52685	27.25451	29.73141	34.31262	39.7837	44.5334	
8/28/2015	24.64472	23.45383	22.45676	21.3621	22.12211	23.30743	24.44725	27.62122	30.85921	35.61563	41.09948	47.50644	
8/29/2015	26.39252	23.98882	22.69373	21.73147	21.67105	22.73462	25.10212	28.21977	32.25073	38.3093	44.84105	50.59639	
8/30/2015	25.63504	23.46313	22.11677	20.46584	20.56904	22.66911	25.12016	27.09061	30.41581	34.56818	42.29231	45.77521	
8/31/2015	24.72311	21.97708	19.31899	17.18076	17.05418	20.3792	23.46403	25.85247	27.14015	29.45977	35.97389	36.47539	

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**SAMPLE ONLY**

Indicative Pricing for August 1 - 31, 2015 PJM Day-Ahead Locational Marginal Price ("LMP") for the Applicable PJM Load Zone

	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
34.48211	37.97071	44.45099	49.91729	50.98714	43.0514	34.43246	33.95292	33.44113	34.10367	26.95011	26.10642	
33.18912	34.1325	35.51754	36.62134	37.21195	36.95589	35.00786	31.75269	31.10128	28.90249	26.31709	25.34211	
28.64531	28.60653	28.5005	28.63872	29.05238	29.01081	28.55574	28.2445	27.43683	27.13069	25.57879	22.49436	
28.57608	28.94386	29.718	30.02527	29.79558	29.83772	29.474	28.83761	27.10782	26.25255	24.97066	22.49396	
30.94133	32.33821	34.0083	37.44913	38.30943	40.33559	35.52774	33.51285	33.41819	32.17038	26.67215	25.25109	
40.5145	41.7113	44.37237	49.6188	52.65419	50.0725	40.03226	34.23513	35.31503	32.70898	26.69941	25.59496	
36.16958	45.34455	49.03912	56.87237	61.04683	55.33819	38.5561	35.12516	34.67668	31.90132	26.20366	25.57583	
39.25865	46.00863	47.41474	48.19695	46.56611	42.06961	35.9283	32.42463	31.62342	30.56746	24.88469	24.11227	
35.83657	41.25574	45.6446	50.20307	51.61625	48.53388	36.50805	33.21274	32.35465	31.15708	26.80213	24.7001	
33.13391	36.19457	40.9468	45.66898	46.12297	43.56812	33.11453	32.07815	31.03505	30.0778	26.15058	24.43352	
31.94102	33.47438	33.07334	34.84301	36.89371	36.45175	32.17957	31.62327	30.87606	29.77067	26.17971	25.49062	
35.65771	40.51363	42.02176	45.16503	48.69228	48.61457	42.27125	36.06419	35.3856	36.19847	28.34208	26.25741	
40.33182	45.36997	50.11053	52.96263	55.47507	52.41199	41.36138	39.23622	41.1526	38.37331	30.70916	27.22674	
42.00854	46.62894	52.34161	56.37018	60.78159	51.9757	42.52743	38.60851	39.59614	40.06871	30.46386	28.65785	
38.20442	43.42621	47.45548	48.00975	49.97033	47.79947	37.98563	35.22982	33.38881	33.02666	26.63208	25.42102	
32.51629	33.69589	37.56237	41.61992	49.69221	48.20161	34.55061	33.06366	32.6206	32.30738	26.87796	25.95524	
39.08325	42.38087	50.4725	60.67809	66.41314	63.2065	43.80656	40.43387	37.48279	37.04804	31.22424	28.80183	
50.00056	53.71276	63.44815	73.77967	81.95291	80.37174	58.45414	48.97988	47.4835	45.69816	33.35251	32.14193	
45.601	48.37539	56.29529	68.35793	76.03814	74.60243	58.80981	45.9295	46.46461	46.24604	34.82913	34.1786	
51.10138	62.39412	72.00633	80.59745	91.01326	83.72113	57.02148	47.16752	42.88744	38.87798	34.17735	32.09922	
48.58304	57.41968	65.87294	70.40471	72.99614	64.40393	50.08726	43.52088	39.94998	37.79063	32.86284	30.13162	
37.82355	38.87257	44.27958	53.95099	58.92768	54.58432	37.79381	36.40913	34.71589	34.10034	29.07177	27.33337	
38.40585	41.69054	45.76652	53.28672	62.08005	54.93021	42.62027	37.00747	36.99931	36.5388	29.07741	27.32492	
40.58879	42.99858	49.34485	59.39186	75.76936	61.0121	45.00476	41.2696	40.33732	39.72942	31.17758	29.07777	
39.01681	39.83841	43.49609	53.88305	62.82263	61.16612	42.93419	39.38919	38.68771	37.40522	30.97489	27.50334	
37.78791	41.04987	47.74797	65.1905	58.24174	61.18803	47.64626	39.87813	36.18611	34.82774	28.6825	26.68336	
45.90567	52.45335	59.02216	76.23655	81.72259	72.96847	56.48608	46.13661	44.68852	41.36885	32.63183	27.80985	
49.85943	54.65649	65.67398	81.11953	90.58576	82.95703	56.73835	51.12402	48.49658	44.39351	34.88144	30.60824	
61.90701	85.56142	119.8511	150.5232	161.7073	144.6698	89.97028	53.8365	51.99357	49.09585	37.27228	30.00284	
49.96095	60.77311	78.3649	87.63724	96.28881	81.60684	56.43739	43.69517	40.99201	35.82708	31.25242	27.74027	
38.38089	42.86921	50.4561	57.08062	60.94426	56.03377	43.1774	36.97641	35.78123	34.01969	28.80537	25.86895	

**SAMPLE ONLY**

August 1 - 31, 2015 Rate Schedule MBR - GS-3 Total Generation Energy Charge

Date	Hour Beginning				
	0:00	1:00	2:00	3:00	4:00
8/1/2015	\$411.24381	\$402.97498	\$382.06316	\$342.09496	\$338.63185
8/2/2015	\$407.07537	\$385.89577	\$346.55802	\$308.92933	\$310.12987
8/3/2015	\$348.01453	\$311.53953	\$242.37221	\$210.02495	\$213.50618
8/4/2015	\$319.32856	\$222.52328	\$176.40158	\$166.56868	\$153.74616
8/5/2015	\$355.20902	\$241.47484	\$226.37556	\$166.37632	\$172.86222
8/6/2015	\$367.30261	\$338.82764	\$336.80036	\$320.21054	\$320.79704
8/7/2015	\$386.95781	\$339.63113	\$317.13986	\$293.31485	\$294.97176
8/8/2015	\$395.95609	\$369.19857	\$321.23991	\$284.82988	\$288.76561
8/9/2015	\$394.75487	\$384.51518	\$335.93548	\$302.22268	\$297.79980
8/10/2015	\$413.53818	\$390.39355	\$326.49809	\$308.43585	\$315.81142
8/11/2015	\$432.44204	\$426.98038	\$404.40498	\$377.73073	\$358.55192
8/12/2015	\$405.64570	\$380.88383	\$348.60155	\$298.99743	\$243.15586
8/13/2015	\$403.45837	\$406.31531	\$397.40645	\$370.96406	\$388.43843
8/14/2015	\$418.37504	\$407.13162	\$412.89235	\$397.96662	\$394.14306
8/15/2015	\$423.78676	\$404.44551	\$385.33030	\$373.43986	\$373.02777
8/16/2015	\$415.75663	\$392.74606	\$338.85295	\$292.90652	\$299.27581
8/17/2015	\$441.91039	\$428.72023	\$395.43183	\$358.19762	\$363.12254
8/18/2015	\$492.89697	\$456.31202	\$443.75129	\$441.25395	\$434.83952
8/19/2015	\$463.17992	\$439.52265	\$411.61914	\$392.21513	\$378.36203
8/20/2015	\$478.27271	\$435.22340	\$419.24436	\$417.91113	\$418.22148
8/21/2015	\$520.80955	\$479.87644	\$436.05220	\$405.40939	\$406.35207
8/22/2015	\$456.58646	\$431.30836	\$383.37176	\$360.60399	\$390.91251
8/23/2015	\$434.15538	\$412.35013	\$360.54517	\$337.25862	\$341.50503
8/24/2015	\$429.23697	\$416.75471	\$369.92529	\$350.97475	\$359.73706
8/25/2015	\$430.94124	\$417.33968	\$366.45808	\$318.53293	\$300.30484
8/26/2015	\$422.83707	\$407.62220	\$374.44922	\$318.23438	\$291.03655
8/27/2015	\$400.73840	\$399.58181	\$391.01271	\$364.57597	\$368.39781
8/28/2015	\$421.40519	\$401.04191	\$383.99280	\$365.27499	\$378.27055
8/29/2015	\$451.29118	\$410.18982	\$388.04480	\$371.59092	\$370.55779
8/30/2015	\$438.33887	\$401.20093	\$378.17924	\$349.94965	\$351.71429
8/31/2015	\$422.74559	\$375.79066	\$330.33788	\$293.77738	\$291.61297

Total Generation Energy Charge: \$441,435.06

(Continued)

**SAMPLE ONLY**

August 1 - 31, 2015 Rate Schedule MBR - GS-3 Total Generation Energy Charge

5:00	6:00	7:00	8:00	9:00	10:00
\$396.34510	\$415.32180	\$439.62114	\$457.95902	\$499.55404	\$567.20876
\$386.32291	\$414.52207	\$444.05651	\$467.16626	\$488.31473	\$537.94911
\$263.83684	\$288.88804	\$333.47593	\$402.89307	\$447.32810	\$464.97003
\$154.56196	\$146.33776	\$196.42715	\$375.01777	\$435.28427	\$456.85492
\$166.32092	\$159.90700	\$224.19729	\$387.08058	\$440.41626	\$452.52027
\$341.24496	\$400.48174	\$421.24343	\$450.61542	\$496.41770	\$534.55355
\$337.93250	\$380.71728	\$400.51303	\$423.66553	\$483.80362	\$529.87127
\$344.53433	\$389.76840	\$410.31703	\$448.16203	\$519.77642	\$599.91100
\$358.68119	\$395.18560	\$408.95064	\$426.25332	\$472.88252	\$503.49113
\$356.99333	\$413.68096	\$412.46401	\$421.64440	\$457.59480	\$493.68354
\$369.21327	\$364.05290	\$404.39284	\$447.82551	\$463.25823	\$509.46234
\$242.73556	\$257.37864	\$345.62902	\$424.94489	\$448.89986	\$510.68049
\$410.09936	\$424.41020	\$436.91194	\$488.83762	\$553.79529	\$597.93142
\$412.71964	\$423.25087	\$461.65347	\$507.67274	\$538.58281	\$704.37211
\$407.79114	\$435.20767	\$457.66850	\$479.80514	\$522.93857	\$618.85162
\$372.70237	\$437.25735	\$452.87166	\$458.40479	\$485.85022	\$529.95985
\$432.44375	\$466.25521	\$477.17819	\$501.28482	\$550.11024	\$617.40503
\$445.18984	\$453.79895	\$479.86533	\$524.98911	\$618.48723	\$688.76429
\$389.82962	\$400.82766	\$428.69013	\$486.72690	\$523.84021	\$640.41731
\$435.74834	\$485.18814	\$537.01703	\$583.49815	\$690.62229	\$767.21272
\$438.36110	\$506.82223	\$540.80092	\$575.55831	\$654.85434	\$712.78406
\$429.64376	\$457.29027	\$474.65639	\$480.54040	\$519.53429	\$620.56086
\$403.54404	\$460.74756	\$461.20958	\$490.80762	\$524.03959	\$593.95517
\$408.55462	\$452.03004	\$461.43289	\$474.60920	\$531.59026	\$655.28422
\$305.77983	\$334.65731	\$413.07035	\$455.29821	\$479.47752	\$571.67422
\$288.69430	\$311.40291	\$394.19180	\$435.04591	\$460.10770	\$535.54069
\$403.78257	\$419.38970	\$466.03053	\$508.38356	\$586.71862	\$680.26975
\$398.53859	\$418.02861	\$472.30098	\$527.66804	\$608.99906	\$702.76855
\$388.74399	\$429.22636	\$482.53571	\$551.46193	\$655.05868	\$766.74643
\$387.62382	\$429.53483	\$463.22797	\$520.08625	\$591.08849	\$723.16499
\$348.46817	\$401.21632	\$442.05675	\$464.07506	\$503.73873	\$615.12502

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**SAMPLE ONLY**

August 1 - 31, 2015 Rate Schedule MBR - GS-3 Total Generation Energy Charge

11:00	12:00	13:00	14:00	15:00	16:00
\$577.36552	\$589.61676	\$649.26906	\$760.07671	\$853.54611	\$871.83970
\$546.67980	\$567.50766	\$583.63871	\$607.32179	\$626.19590	\$636.29486
\$475.14919	\$489.81211	\$489.14900	\$487.33597	\$489.69942	\$496.77268
\$477.06106	\$488.62833	\$494.91707	\$508.15425	\$513.40833	\$509.48081
\$501.95630	\$529.07223	\$552.95777	\$581.51499	\$640.35045	\$655.06090
\$612.45207	\$692.76585	\$713.23018	\$758.73237	\$848.44217	\$900.34493
\$594.58699	\$618.47116	\$775.35588	\$838.53010	\$972.47247	\$1,043.85243
\$617.42520	\$671.29181	\$786.71112	\$810.75449	\$824.12966	\$796.24359
\$577.16751	\$612.77695	\$705.44047	\$780.48650	\$858.43272	\$882.59698
\$539.57832	\$566.56361	\$618.89847	\$700.15784	\$780.90338	\$788.66624
\$540.99055	\$546.16614	\$572.38538	\$565.52791	\$595.78787	\$630.85321
\$556.82116	\$609.71859	\$692.75097	\$718.53880	\$772.28623	\$832.59941
\$672.23056	\$689.64217	\$775.79054	\$856.85036	\$905.61901	\$948.57974
\$697.57637	\$718.31275	\$797.31793	\$895.00006	\$963.88542	\$1,039.31703
\$636.11532	\$653.26531	\$742.55378	\$811.45111	\$820.92869	\$854.45305
\$541.35254	\$556.00280	\$576.17302	\$642.28677	\$711.66766	\$849.69742
\$590.42453	\$668.29261	\$724.67930	\$863.03976	\$1,037.54726	\$1,135.61208
\$761.51510	\$854.96996	\$918.44564	\$1,084.91310	\$1,261.57390	\$1,401.32983
\$702.71349	\$779.74097	\$827.18084	\$962.60486	\$1,168.86644	\$1,300.19195
\$774.47236	\$873.79311	\$1,066.89002	\$1,231.25119	\$1,378.15254	\$1,556.25464
\$782.73983	\$830.73149	\$981.83104	\$1,126.37508	\$1,203.86476	\$1,248.17616
\$612.62443	\$646.75274	\$664.69015	\$757.14574	\$922.51918	\$1,007.61664
\$607.67404	\$656.70961	\$712.87520	\$782.57123	\$911.16069	\$1,061.51967
\$696.91856	\$694.03615	\$735.24165	\$843.75784	\$1,015.55375	\$1,295.59602
\$662.00797	\$667.15654	\$681.20525	\$743.74868	\$921.35746	\$1,074.21720
\$622.78598	\$646.14332	\$701.92025	\$816.45246	\$1,114.70590	\$995.88761
\$761.48586	\$784.95059	\$896.91073	\$1,009.23217	\$1,303.58460	\$1,397.39154
\$812.32249	\$852.55675	\$934.58268	\$1,122.97303	\$1,387.07969	\$1,548.94473
\$865.15818	\$1,058.56082	\$1,463.03249	\$2,049.35800	\$2,573.82763	\$2,765.06722
\$782.71982	\$854.29266	\$1,039.17203	\$1,339.97770	\$1,498.52737	\$1,646.46236
\$623.70027	\$656.28281	\$733.02953	\$862.75933	\$976.03338	\$1,042.09856

(Continued)

# **SAMPLE ONLY**

August 1 - 31, 2015 Rate Schedule MBR - GS-3 Total Generation Energy Charge

17:00	18:00	19:00	20:00	21:00	22:00	23:00
\$736.14483	\$588.76779	\$580.56803	\$571.81683	\$583.14574	\$460.82553	\$446.39910
\$631.91644	\$598.60567	\$542.94584	\$531.80725	\$494.20968	\$450.00139	\$433.33000
\$496.06187	\$488.28053	\$482.95857	\$469.14806	\$463.91330	\$437.37704	\$384.63573
\$510.20137	\$503.98205	\$493.10028	\$463.52224	\$448.89781	\$426.97850	\$384.62889
\$689.70663	\$607.49621	\$573.04318	\$571.42457	\$550.08801	\$456.07263	\$431.77363
\$856.20008	\$684.51993	\$585.39360	\$603.85903	\$559.29764	\$456.53876	\$437.65354
\$946.23921	\$659.27876	\$600.61241	\$592.94375	\$545.48730	\$448.06183	\$437.32643
\$719.35700	\$614.34546	\$554.43548	\$540.73543	\$522.67935	\$425.50848	\$412.30071
\$829.89090	\$624.25873	\$567.91154	\$553.23888	\$532.76138	\$458.29519	\$422.35214
\$744.98033	\$566.23223	\$548.51095	\$530.67477	\$514.30655	\$447.15420	\$417.79383
\$623.29604	\$550.24515	\$540.73286	\$527.95616	\$509.05487	\$447.65230	\$435.86941
\$831.27063	\$722.80488	\$616.66908	\$605.06572	\$618.96516	\$484.62711	\$448.98091
\$896.20350	\$707.24883	\$670.90828	\$703.67686	\$656.15320	\$525.10231	\$465.55568
\$888.74329	\$727.18336	\$660.17493	\$677.06262	\$685.14320	\$520.90787	\$490.02653
\$817.33307	\$649.52418	\$602.40201	\$570.92220	\$564.72972	\$455.38747	\$434.67930
\$824.20934	\$590.78806	\$565.36239	\$557.78642	\$552.43060	\$459.59182	\$443.81404
\$1,080.78107	\$749.05747	\$691.38714	\$640.92601	\$633.49213	\$533.90977	\$492.48847
\$1,374.29308	\$999.51948	\$837.51714	\$811.93023	\$781.40233	\$570.30150	\$549.60154
\$1,275.64245	\$1,005.60116	\$785.35806	\$794.50802	\$790.77064	\$595.55053	\$584.42698
\$1,431.56499	\$975.02213	\$806.52722	\$733.34124	\$664.78266	\$584.40561	\$548.87123
\$1,101.25618	\$856.45246	\$744.17257	\$683.11301	\$646.18983	\$561.92853	\$515.22683
\$933.34863	\$646.24421	\$622.56728	\$593.61421	\$583.08880	\$497.10423	\$467.37897
\$939.26307	\$728.77285	\$632.79842	\$632.65889	\$624.78453	\$497.20067	\$467.23448
\$1,043.25857	\$769.54574	\$705.67746	\$689.73621	\$679.34160	\$533.11192	\$497.20683
\$1,045.89219	\$734.14063	\$673.52394	\$661.52919	\$639.59963	\$529.64608	\$470.28532
\$1,046.26683	\$814.71330	\$681.88443	\$618.75381	\$595.52676	\$490.44803	\$456.26432
\$1,247.70303	\$965.86721	\$788.89948	\$764.13829	\$707.37456	\$557.97844	\$475.52640
\$1,418.49949	\$970.18083	\$874.18024	\$829.25309	\$759.09385	\$596.44499	\$523.37665
\$2,473.73845	\$1,538.42051	\$920.56150	\$889.04885	\$839.50014	\$637.32646	\$513.02479
\$1,395.41231	\$965.03465	\$747.15279	\$700.93089	\$612.61468	\$534.39162	\$474.33664
\$958.13307	\$738.29933	\$632.26732	\$611.83068	\$581.70975	\$492.54900	\$442.33855

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Michael S. Hupp, Jr.

Title: Director of Power Generation Regulated Operations

Summary:

My direct testimony discusses the technical elements of two experimental and voluntary companion tariffs, designated proposed Rate Schedule MBR - GS-3 and Rate Schedule MBR - GS-4 ("MBR Rate Schedules").

I describe the Company's energy desk functions relating to PJM Interconnection, L.L.C. ("PJM"), and discuss the technical elements of the MBR Rate Schedules that relate to PJM market and operations. Together with a margin charge, which is a \$/MWh charge tied to participating customers' monthly load factor, the principal components of the MBR Rate Schedules that reflect interactions in the PJM markets are the: Generation Capacity Charge; Generation Energy Charge; PJM Ancillary Service Charge; and PJM Administrative Charge.

The MBR Rate Schedules will not impact how the Company's load will be bid or otherwise offered into the PJM market. The Company will continue to procure energy and capacity requirements to service its load as it has in the past. The only distinction will be that a customer electing the applicable companion MBR Rate Schedule will be charged a rate that reflects the PJM wholesale market pricing. Consequently, the MBR Rate Schedules will not change the Company's load obligation procurement process or the Company's actual costs to serve its load.



**DIRECT TESTIMONY  
OF  
MICHAEL S. HUPP, JR.  
ON BEHALF OF  
VIRGINIA ELECTRIC AND POWER COMPANY  
BEFORE THE  
STATE CORPORATION COMMISSION OF VIRGINIA  
CASE NO. PUE-2015-00108**

1    **Q.    Please state your name, position of employment, and business address.**

2    A.    My name is Michael S. Hupp, Jr., and I am Director of Power Generation Regulated  
3           Operations in the Dominion Generation business segment of Virginia Electric and Power  
4           Company ("Dominion Virginia Power" or the "Company"). My business address is 5000  
5           Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my background and  
6           qualifications is attached as Appendix A.

7    **Q.    Please describe your areas of responsibility with the Company.**

8    A.    In my current position, I am responsible for overseeing the Energy Supply group which is  
9           responsible for a variety of commercial activities in support of serving the wholesale  
10          forward and daily load requirements of the Company. This includes the offering of  
11          Company-controlled generation assets into PJM Interconnection, L.L.C. ("PJM"), the  
12          forward and daily net purchase of required energy and capacity from PJM, the  
13          administration of non-utility generator contracts, and the administration of wholesale  
14          contracts in support of commercial operations for the Company.

15   **Q.    Please describe your testimony and the issues that you will address.**

16   A.    I am presenting testimony in support of the application ("Application") that Dominion  
17          Virginia Power has filed with the State Corporation Commission of Virginia  
18          ("Commission") for approval of two experimental and voluntary tariffs offering certain

1 qualifying high load-factor customers a market-based rate ("MBR"), designated Rate  
2 Schedule MBR - GS-3 (Experimental) and Rate Schedule MBR - GS-4 (Experimental)  
3 (collectively, the "MBR Rate Schedules") pursuant to § 56-234 B of the Code of Virginia  
4 ("Va. Code" or "Code").

5 Company Witness Gregory J. Morgan describes the purpose and design of the MBR, and  
6 what can be learned from such an experimental rate.

7 My direct testimony describes the Company's energy desk functions relating to PJM and  
8 discusses the technical elements of the MBR Rate Schedules that relate to PJM markets  
9 and operations.

10 **Q. Please provide an overview of the Company's energy desk functions.**

11 A. The Company's Energy Supply group has a well-developed knowledge of the PJM  
12 market and operations resulting from working directly with the PJM market rules for  
13 energy, capacity and other PJM products. These energy desk personnel have vast  
14 operational experience in the PJM markets and have developed this specialized expertise  
15 over many years. They are responsible for a variety of PJM market function activities  
16 including: offering generation resources into the daily energy market, preparing and  
17 entering schedules for energy transactions, and arranging after-market settlement actions.  
18 The energy desk personnel develop comprehensive offer strategies in PJM markets,  
19 which requires a thorough knowledge of the market rules and offer requirements for both  
20 generation resources and demand resources.

21 The energy desk manages the Company's capacity portfolio, including the development  
22 of capacity resource offer strategies to optimize the value of those capacity resources in

1 relation to the load procurement requirement. Optimizing the capacity portfolio requires  
2 the energy desk personnel to negotiate and execute bilateral capacity sales and purchase  
3 transactions to minimize costs to service the capacity load obligation.

4 **Q. How will the MBR Rate Schedules work and what are their principal components?**

5 A. Company Witness Morgan testifies that the MBR Rate Schedules, if approved by the  
6 Commission, will allow qualifying customers to migrate to the applicable MBR Rate  
7 Schedule, which contains the MBR component as a proxy for load service costs in the  
8 PJM wholesale market. My testimony addresses only the technical elements of those rate  
9 schedules that reflect interactions in the PJM markets and with PJM operations.

10 The principal components of the MBR Rate Schedules that reflect interactions in the PJM  
11 markets are:

12 Generation Capacity Charge – customer's estimated peak load will be applied to the PJM  
13 cleared capacity price for the applicable delivery zone to determine that customer's  
14 capacity cost under the MBR Rate Schedules;

15 Generation Energy Charge – customer's hourly energy consumption will be matched to  
16 and multiplied against the respective hourly Day Ahead locational marginal price  
17 ("LMP") for that customer's load account(s) on the MBR Rate Schedules. In the current  
18 market environment, the Day Ahead LMP would be the Dominion Zone LMP as  
19 published by PJM; and

20 PJM Ancillary Service Charge and PJM Administrative Charge – customer will also be  
21 responsible for a load weighted share of the Company's PJM ancillary service costs and

1 administrative fees which will be determined by calculating the Dominion Load Serving  
2 Entity ("DOM LSE") total net charges in relation to total DOM LSE load which was  
3 served and applying that rate to such customer's volume for the same period.

4 These charges, together with a margin charge, which is a \$/MWh charge tied to a  
5 participating customer's monthly load factor, are more fully described in the MBR Rate  
6 Schedules.

7 **Q. Will the MBR Rate Schedules impact the continuation of reliable electric service to**  
8 **the Company's customers?**

9 A. No. The MBR Rate Schedules will not impact the continuation of reliable utility service  
10 in any way.

11 **Q. Will there be any change to the Company's load obligation procurement process as**  
12 **a result of the MBR Rate Schedules?**

13 A. No. An election to move an account from Rate Schedule GS-3 to Rate Schedule MBR -  
14 GS-3 (Experimental), for example, will not impact how the Company's load will be bid  
15 or otherwise offered into the PJM market. The Company will continue to procure energy  
16 and capacity requirements to service its load as it has in the past. The only distinction  
17 will be that a customer electing Rate Schedule MBR - GS-3 (Experimental) will be  
18 charged a rate that reflects PJM wholesale market pricing. Consequently, the MBR Rate  
19 Schedules will not change the Company's load obligation procurement process or the  
20 Company's actual costs to serve its load.

21 **Q. Does this conclude your direct testimony?**

22 A. Yes, it does.

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APPENDIX A

**BACKGROUND AND QUALIFICATIONS**  
**OF**  
**MICHAEL S. HUPP, JR.**

Michael S. Hupp graduated from West Virginia University in 1999 with a Bachelor of Science degree in Petroleum & Natural Gas Engineering. In 2004, he received a Master's degree in Business Administration from Virginia Commonwealth University.

Mr. Hupp has worked for Dominion for 16 years in a variety of functions including as a Petroleum Engineer in the Exploration and Production group, the Business Planning and Market Analysis ("BPMA") group within Dominion Resources Services, Inc. ("DRS"), and eventually the Pricing and Structuring ("P&S") segment of the BPMA organization. He was promoted to Director of the P&S group in 2007 which marked his first leadership role in his career.

In 2011, Mr. Hupp joined the Financial Analysis ("FA") group within DRS where he served as Director of the group. While in FA, he was responsible for overseeing the financial evaluation of a variety of investment opportunities by all segments of Dominion. His group studied the impacts of potential investment opportunities on shareholders and was responsible for the development of all financial analyses used for internal governance processes. In August of 2014, Mr. Hupp transitioned into the role of Director of Power Generation Regulated Operations where he currently serves.

Mr. Hupp has previously testified before the State Corporation Commission of Virginia.